

PORTLAND GENERAL ELECTRIC COMPANY

621 S.W. ALDER ST.

PORTLAND, OREGON 97205

ESTES SNEDECOR, JR.
VICE PRESIDENT

February 23, 1973

Columbia-Willamette Air Pollution Authority
1010 N. E. Couch Street
Portland, Oregon 97232

Attention: Air Contaminant Discharge Permit Program

Gentlemen:

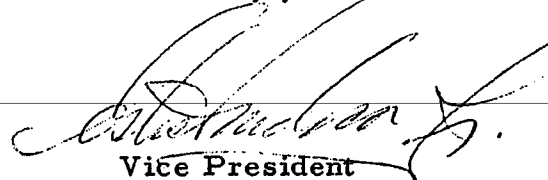
Enclosed are three copies of a completed Application for Air Contaminant Discharge Permit for eight combustion gas turbines now under construction. Also enclosed are three copies of each of the following supporting documents:

1. Schedule I - General Description of Air Contaminant Source
2. Schedule II - Detailed Description of Air Contaminant Source
3. Schedule III - Additional Plant Site Information
4. Report UAR-L147, "Infrared Imaging of Turbine Exhaust Plumes"
5. Exhibit A - Process Flow Diagram
6. Exhibit B - Plot Plan

An exhaust emissions report including raw data taken at South Meadows Station, Hartford, Connecticut on December 20, 1972, is provided along with an actual test tape of NO_x measurements, three copies of the field calibration and smoke tape measurement data sheets (Exhibits C and D), and colour photographs of stack effluents related to the test tape (Exhibits E-I).

A check for \$225.00 to cover permit application fees is also enclosed.

Sincerely yours,



Vice President

Enclosures
ES/RLK/lw

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232
Phone: (503) 233-7176

For CWAPA Use:

Application No. _____

Permit No. _____

APPLICATION FOR AIR CONTAMINANT DISCHARGE PERMIT

NOTE: Prepare 4 copies, each to include all SCHEDULES and EXHIBITS
Retain 1 copy and forward 3 copies to this Authority,
attention, Air Contaminant Discharge Permit Program.

The applicant named below hereby submits this completed application and requests that the source site described herein be issued an air contaminant discharge permit for the air contaminant source(s) named in Item number 3 below:

1. Official Applicant Identification:

Firm Name Portland General Electric Co.

Division Power Resources

Mailing Address 621 S. W. Alder Street

City Portland, State Oregon Zip 97205

Phone Area Code 503 / 228-7181

2. Source Site Description:

Business Name Portland General Electric Co.

Plant Site Address _____

City Portland, State Oregon Zip 97205

Phone (503) 228-7181

3. Air Contaminant Source(s) and fees as listed in CWAPA Rules, Title 22, for your operation are shown below. Complete and attach the information for each source as required by Schedules I, II and III of this application.

Air Contaminant Source	S.I.C. Number	AIPID Fee*	PCD Fee**
a. <u>8 Combustion Gas Turbines</u>	_____	<u>\$ 25.00/</u>	<u>\$ 225.00</u>
b. _____	_____	<u>\$ _____</u>	<u>\$ _____</u>
c. _____	_____	<u>\$ _____</u>	<u>\$ _____</u>
Totals		<u>\$ _____</u>	<u>\$ _____</u>

Submit with this application a check in the amount of \$200.00 payable to this Authority, for total AIPID fee plus \$25.00 filing fee. The first total PCD fee in the amount of \$ 225.00 must be paid prior to final issuance of permit and may be included with this application.

* Application, Investigation and Permit Issuing or Denying Fee

** Permit Compliance Determination Fee

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oreg. 97232
Phone: (503) 233-7176

For CWAPA Use:

Application No. _____

Permit No. _____

4. Person Authorized to Receive Permit:

Name A. J. Porter
Title Senior Vice President Phone: Area Code 503 / 228-7181
Address 621 S. W. Alder Street
City Portland, State Oregon Zip 97205

5. Person to Contact (at plant site) for Additional Details:

Name N. H. Burman
Title Superintendent, E.M. & C. Phone: Area Code 503 / 228-7181
Address 621 S. W. Alder Street
City Portland, State Oregon Zip 97205

6. Status of Applicant (Check as appropriate)

 Lessee Government Agency
 Individual Owner Partnership X Corporation

7. Name and Address of the Individual Owner, Partner or Corporation's Registered Agent:

Name Warren Hastings
Title Assistant Secretary Phone: Area Code 503 / 228-7181
Address 621 S. W. Alder Street
City Portland, State Oregon Zip 97205

8. Certification: I hereby certify that the information contained in this application, schedules and exhibits is true and correct to the best of my knowledge and belief.

Estes Snedecor, Jr.

(Signature of owner or legally authorized representative)

Vice President

(Title)

February 23, 1973

(Date)

APPLICATION FOR AIR CONTAMINANT DISCHARGE PERMIT

Page 2 of 2 pages

PGE0047125

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232
Phone: (503) 233-7176

For CWAPA Use:

Application No. _____
Permit No. _____

SCHEDULE I - GENERAL DESCRIPTION OF AIR CONTAMINANT SOURCE

The information required in this schedule must be furnished for each air contaminant source listed in Item 3, page 1 of application.

Air Contaminant Source
(as listed in Item 3 of application)

S.I.C.

8 Combustion Gas Turbines

1. Air contaminant source process production rate as stated in applicable rules.

(For an air contaminant source process or any component thereof for which a specific emission standard has been adopted, state the production rate in the units delineated in the applicable section of the rules.)

Fuel burning equipment 3.0×10^9 Btu/hr. input

2. Air contaminant source process production rate as generally stated in the industry:

a. Maximum hourly production rate 254.4 MW @ 30°F

b. Normal hourly production rate 194 MW @ 80°F

- c. Primary operating schedule of air contaminant source process; indicate by hours per day, days per week and weeks per year. If seasonal, indicate normal season.

August-October 24-hr. operation - 1000 hrs. estimated total

December-January 4:00 - 8:00 p.m. operation - 250 hrs. estimated total

- d. Annual quantity of major material(s) processed (Use additional sheet if necessary)

<u>Material</u>	<u>Amount Processed Annually</u>
<u>✓ No. 2 Distillate Oil</u>	<u>664,300 BBL /</u>
<u>Natural Gas</u>	<u>4.1×10^6 Therms</u>
<u> </u>	<u> </u>
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Application No. _____

Permit No. _____

SCHEDULE II - DETAILED DESCRIPTION OF AIR CONTAMINANT SOURCE

A separate set of Exhibits A and B required by this schedule must be attached for each air contaminant source named in Item 3, page 1 of application.

Source 8 Combustion Gas Turbines SIC

1. Exhibit A - Process Flow Diagram For the Air Contaminant Source Listed in Item 3, page 1 of application

Attach as Exhibit A, a process flow diagram showing relationship of process equipment, type and quantity of process materials and their point of introduction, air contaminant control equipment and air contaminant discharge points. Each air contaminant discharge point must be referenced with a unique descriptive item name. In a permit renewal or modification application, air contaminant discharge points that retain the same information as that given for the previous permit must either retain the unique descriptive item name of the previous permit or may be given a new unique descriptive item name providing that the previous permit item name is referenced.

For each air contaminant discharge point appearing in the process flow diagram, delineate the following information:

- a. Unique descriptive item name
- b. Equipment manufacturer's trade name, equipment name and/or model number
- c. Operating schedule in hours per day and days per week and weeks per year. If seasonal, indicate normal season.
- d. Height above ground level of air contaminant discharge point and distance to, height of and use of nearest structure or building.
- e. Normal discharge temperature, velocity and flow rate in Actual Cubic Feet per Minute (ACFM) and Standard Cubic Feet per Minute (SCFM). (Indicate how the information was determined and if test results give date of test.)
- f. Air contaminants emitted and emission rates. (Indicate if this information is estimated or based on emission test results. If emissions have been measured indicate date of last test.)

In addition, for fuel burning equipment and/or incineration equipment include: type of fuel and backup fuel, annual quantity of fuels used, steam capacity and amount normally produced, and/or type and annual quantity of wastes burned.

Clearly identify each exhibit as Exhibit A and reference each air contaminant source by name and number (3a, 3b, etc.) as it appears in Item 3, page 1 of application.

2. Exhibit B - Plot Plan For the Air Contaminant Source Listed in Item 3, page 1 of application.

A separate set of Exhibits required by this section must be attached for each air contaminant source named in Item 3, page 1 of application.

Attach as Exhibit B, a site plot plan showing the physical location of process equipment and air contaminant control equipment. Each air contaminant discharge point must be referenced with a unique descriptive item name identical to the item name used in Exhibit A. The plot plan or a second plot plan must show the location of the nearest residential and/or commercial property, structures, height of structures, road way and clearly indicate proper site access.

Clearly identify each exhibit as Exhibit B and reference each air contaminant source by name and number (3a, 3b, etc.) as it appears in Item 3, page 1 of application.

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SCHEDULE III - ADDITIONAL PLANT SITE INFORMATION

1. Refuse Disposal Methods:

Indicate quantity and disposal method and location for each type or residue, waste or refuse generated including liquid waste from air pollution control equipment.

a. Material

- 1) Sanitary Wastes
- 2) Solid Wastes

b. Source

- 1) & 2) Plant operation and maintenance personnel and their activities

c. Quantity

- 1) 20 gal/man-day
- 2) 2 lb/man-day

d. Disposal method

- 1) On-site septic tank and subsurface disposal field
- 2) Removal by Company-owned refuse collection truck for off-site disposal.

e. Disposal site

- 1) Plant property
- 2) Swift Blvd. or other municipal landfill

2. Other Air Contaminant Source(s):

Are other air contaminant source(s) located at plant site for which a permit is not being applied for at this time?

_____ No X Yes If yes, list below and briefly describe.

2 - 100,000 BBL fuel storage tanks w/floating pans, for which permit is not required.

Report: UAR-L147
Date: September, 1972
Prepared by: R. Wey

Infrared Imaging of Turbine Exhaust Plumes

SUMMARY

The feasibility of using the UARL/Bofors Infrared Scanning Camera System to measure the effective stack height of vertical turbine exhaust plumes has been studied. During field tests, a number of detector and filter combinations were tried. The combination (indium antimonide detector and narrow bandpass filter) providing the optimum performance was capable of tracking the plume to an altitude of 50 to 60 meters. At this altitude, however, the plume had not yet become horizontal, and thus the effective stack height could only be inferred by extrapolation. Improvements could probably be realized under better viewing conditions, but if a system suitable for typical-viewing conditions is required, a major redesign of the Bofors optics would be necessary.

This study was performed by the Instrumentation Laboratory under Turbo-Power & Marine Systems sponsorship, on Project 890189.

INTRODUCTION

In response to a request from Turbo-Power & Marine Systems, an experimental investigation was made of the feasibility of using the UARL/Bofors Infrared Scanning Camera System to determine "effective stack height", which is defined as that distance above the ground at which an exhaust plume becomes horizontal due to wind shear. Data on the effective stack height of TP&MS Twin-Pac gas-turbine-driven power generating units are needed to describe the environmental impact of the high-temperature, high-momentum exhaust from these units.

In this investigation, the UARL/Bofors system was set up several hundred meters from the turbines along a bearing roughly normal to the prevailing wind, and infrared images of the plumes were recorded. The primary concern was to determine if the plumes could be imaged and accurately tracked to the altitude at which they level off; if this could be done, subsequent reduction of data to obtain effective stack height would be trivial. (Consideration was also given to measurement of the exhaust gas temperature, because the UARL/Bofors system had

previously been used quite satisfactorily for thermal mapping of various solid surfaces of known emissivity. However, since the emissivity of the gaseous plume cannot be accurately determined, more sophisticated techniques, e.g. a two-color method of average temperature measurement¹, would have been required, and such measurements were considered beyond the scope of a feasibility demonstration.)

Following a brief discussion of the theoretical considerations associated with the problem of infrared detection, the balance of this report will comprise a description of the experimental studies performed, and the conclusions to be drawn therefrom.

DETECTION OF INFRARED RADIATION

The first consideration in designing an infrared detection system is the compatibility of the spectral emission of the source, the spectral transmission of the atmosphere, and the spectral response of the detector. In the present investigations, the source (the hot exhaust gases from the Twin-Pac turbines) had only one constituent, carbon dioxide, having a spectral emission band even roughly corresponding to an atmospheric "window"^{2,3}. The spectral radiance of the emission band of interest (4.4μ) is shown in Fig. 1. Accordingly, for most of the tests described in this report, the IR scanning camera employed an indium antimonide (InSb) photodetector, which has response characteristics (Fig. 2) well suited to detection of the 4.4μ carbon dioxide radiation band.

Given that the source emission, atmospheric transmission, and detector response are compatible, the ability of the UARL/Bofors system to track the plume as it diffuses and cools will be limited by the background infrared radiation and by the inherent system noise. With regard to background radiation, the following sources were considered:

1. Specular reflections from objects in the camera field-of-view. These should present no problem in the present application since, in tracking the plume, the field-of-view will always be well above ground level and no reflecting objects will be included. Of course, the atmosphere itself is a good source of scattered light, but this will be of a much shorter wavelength than the plume emissions, and therefore could be eliminated by filtering.

2. "Airglow". This is simply the infrared emission from atmospheric gases. It is largely composed of longer wavelengths than the InSb detector will respond to⁴, and was therefore not expected to be significant.

3. Cloud light. Presented in Fig. 3 is a typical spectrum from this background source; the data were taken from Gates⁵. Although the radiation peaks at

about 0.5μ , it does have spectral content in the near-IR region where the InSb detector is responsive. Hence, cloud light might be expected to make observation difficult if the signal from the source is weak.

The inherent system noise for a system such as the UARL/Bofors system, which scans a field-of-view and focuses the collected radiation onto a photodetector, is given by the "noise equivalent irradiance" (NEI). The NEI may be expressed³ as:

$$NEI = \frac{4 F(\omega \Delta f)^{1/2}}{\pi D_o^2 D^* \tau_o} \times NF$$

where

F = focal length of optical system (in this case, 50 cm)

ω = instantaneous field of view (in this case, 2.3×10^{-6} steradian)

Δf = system bandwidth (in this case, 2.5×10^5 Hz)

D_o = diameter of optical aperture (in this case, 10 cm)

D^* = detectivity (in this case, 6×10^{10} cm $\sqrt{\text{Hz}}/\text{W}$ for InSb)

τ_o = transmittance of optical system (in this case, .94)

NF = noise figure of electronics (in this case, 3.2)

For the values given, the NEI of the UARL/Bofors system is computed to be 3×10^{-11} W/cm². For comparison, the NEI of the Barnes 12-511 Research Radiometer, when set up with the same detector, field of view, and bandwidth, is three times greater than this, or 9×10^{-11} W/cm².

EXPERIMENTAL INVESTIGATIONS

An indium antimonide infrared detector was installed in the UARL/Bofors Infrared Scanning Camera System, and a small van was outfitted with the scanning camera and its peripherals (a gasoline-powered 110 VAC alternator, and other support equipment) to permit fully mobile operation. Tests were begun in mid-June of 1972 at the South Meadows Station of the Hartford Electric Light Company, where five TP&MS Twin-Pac units are in operation for peak-load generation.

Presented in Fig. 4 are the infrared images of the plumes from one of the Twin-Pacs from two different angles and at two different ranges. The effects of

the cloud background are clearly seen; they were much more pronounced than had been expected. Efforts to track the plumes to greater heights by increasing detector sensitivity were unsuccessful because the high level of background radiation reduced the contrast, thereby limiting the system's capability to discriminate.

In subsequent tests, attempts were made to enhance the contrast ratio by rejecting the unwanted radiation (primarily cloud light) through the use of short-wavelength transmission cutoff windows, a longer wavelength cutoff detector, and narrow bandpass filters.

The transmission characteristics of two potential window candidates (germanium and silicon) are presented in Figs. 5 and 6. With windows of either of these materials in front of the InSb detector, cloud light should be rejected. The results of these tests are presented in Figs. 7 and 8. Figure 7 shows three infrared images of a plume obtained with a germanium window, the scanning-camera being adjusted to progressively greater angles of inclination and higher sensitivities. The leveling-off of the plume can almost be distinguished in the third image, but the basic scanning-camera system noise becomes a limitation. Figure 8 presents a similar series of images obtained with a silicon window. Slightly better results were obtained, but this was more likely due to a higher exhaust temperature at the time this series was taken than to the marginally greater transmission of silicon compared to germanium. The third image of Figure 8 illustrates an effect which was noticed in several of the trials. The plume temperature and/or emissivity appears to suddenly decrease at a certain altitude, roughly 20 meters. Whether this effect is real or simply a peculiarity in this application of the scanning camera could not be ascertained.

A second detector, (mercury-cadmium-telluride) with longer wavelength cutoff characteristics than the InSb device was also tested. The intent was to provide an improved capability for sensing the longer wavelengths emitted from the gas as its temperature decreases. Tests showed, however, that total performance was not improved as the HgCdTe detector apparently was more sensitive to airglow radiation.

The final attempt to reject background radiation utilized a narrow-range bandpass filter obtained from Valpey Corporation. The characteristics of this filter are shown in Figure 9. Atmospheric transmission at the center wavelength of the filter (4.5μ) is 90%, and the reception of 4.4μ CO_2 emission is not seriously affected within the passband of this filter. Infrared images of the plume using an InSb detector both with and without the 4.5μ filter are shown in Figure 10. The contrast capability of the infrared camera was increased by approximately a factor of two for the image using the filter. The effect of wind shear is clearly visible, but greater contrast was simply not possible. The plume can be tracked accurately only to the center of the picture, which corresponds to an altitude of 50-60 meters. At this altitude, the plume has not yet become horizontal, and thus the effective stack height can only be inferred by extrapolation.

DISCUSSION AND CONCLUSIONS

The second image of Figure 10 represents the best information obtained during this project to determine the approximate effective stack height. It shows an image limited by the noise equivalent irradiance (NEI) of the camera, which was defined earlier. Obviously, the information is inconclusive. An examination of the NEI equation shows what modifications might be made to the system to decrease the NEI. Changes in the field of view, optical aperture, detectivity, or transmittance are not possible without radical modifications to the scanning camera. A reduction of the scanning rate, and hence of bandwidth, is the only practical approach. Past experiments at UARL have shown that the framing rate of the camera can be reduced, thus decreasing the required bandwidth, but a decrease from 4 frames/sec to 1/4 frame/sec results in an improvement to the NEI of only four.

Alternatively, the camera can be used in a single-line-scan mode without vertical deflection, and a lock-in amplifier can then be used to condition the detector signal. This can make an improvement of two orders of magnitude or more to the NEI, but the principal advantage of the UARL/Bofors system, infrared imaging, is sacrificed. One might equally well use a radiometer/theodolite system to track the plume, provided the prevailing wind is sufficiently constant to hold the plume in a steady-state condition while the tracking is being performed.

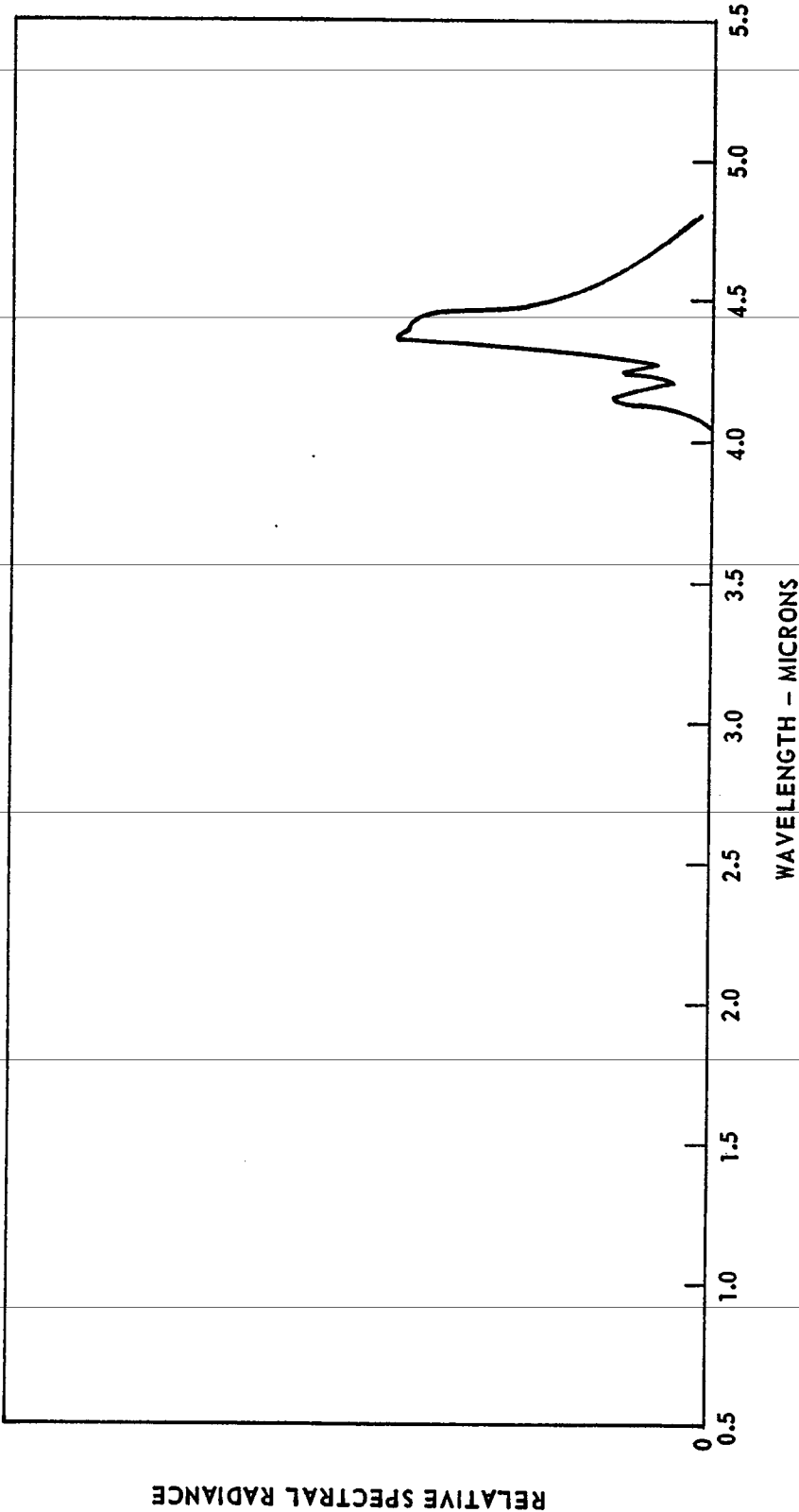
One is led to the conclusion that, with the existing UARL/Bofors system, a decrease of background radiation is required if the infrared imaging approach is to be used for effective stack height determination. Background could be reduced by attempting the infrared imaging not on a hot, humid summer day, as was the case in this project, but on a cold, dry winter night. Since the bandpass filter could be dispensed with, significantly improved results could be obtained. However, if infrared imaging of the plume is to be successful under less ideal viewing conditions, a radical modification of the UARL/Bofors system optics would be necessary.

REFERENCES

1. "Measurement of Temperature Profiles of a Gas Turbine Engine Exhaust Plume", UARL Memo from R. M. Gagosz to A. Summers (TP&MS), Sept. 22, 1971.
2. W. L. Wolfe (ed.), Handbook of Military Infrared Technology, U. S. Govt. Printing Office, Washington, 1965.
3. R. D. Hudson, Infrared System Engineering, Wiley-Interscience, New York, 1969.

4. L. W. Nichols and J. Lamar, "Conversion of Infrared Images to Visible in Color", Applied Optics, Vol. 7, No. 9, Sept. 1968, pp. 1757-1762.
5. D. M. Gates, "Sensing Biological Environments with a Portable Radiation Thermometer", Applied Optics, Vol. 7, No. 9, Sept. 1968, pp. 1803-1809.

4.4 μ EMISSION BAND OF CARBON DIOXIDE



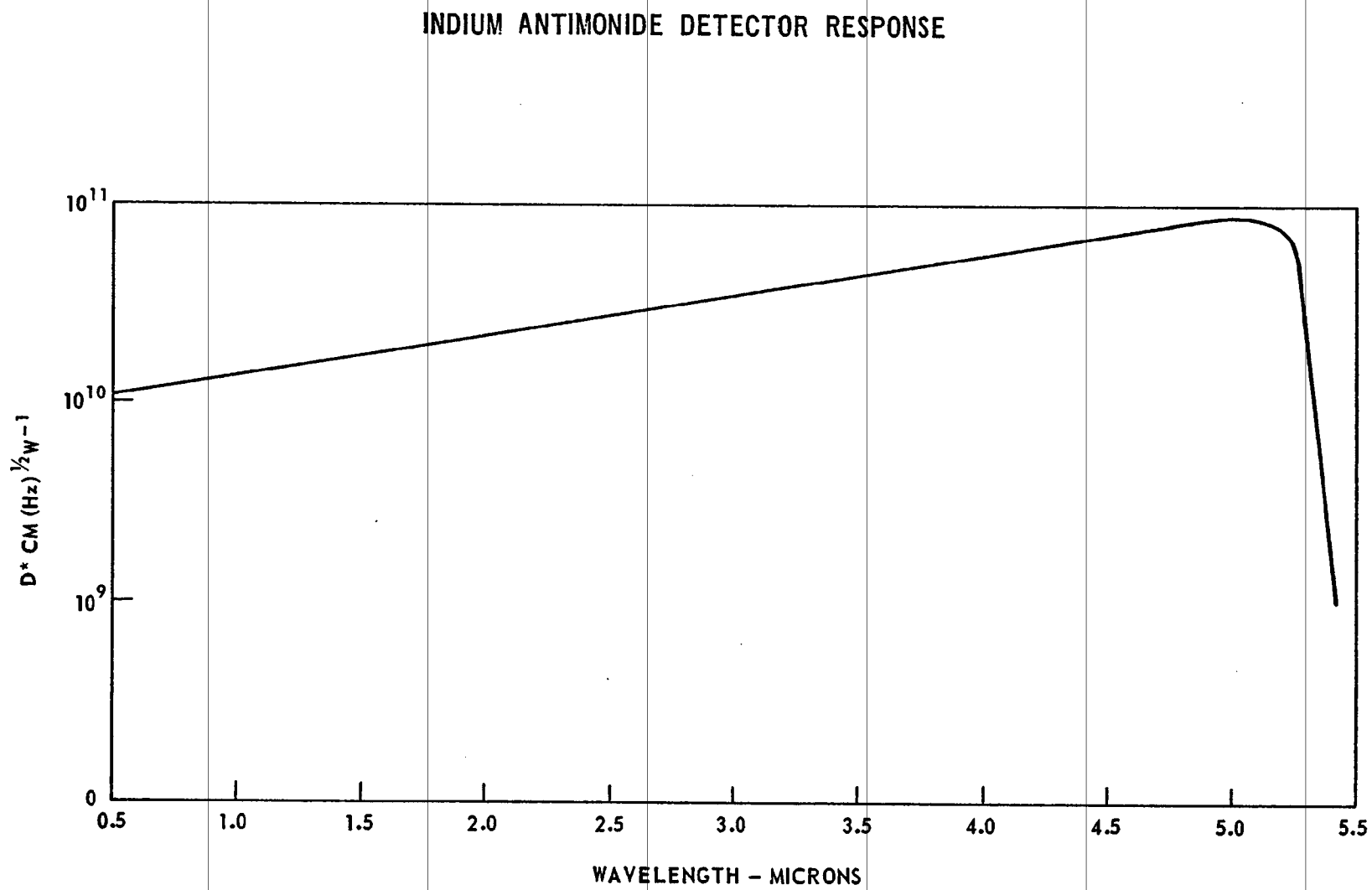


FIG. 2

SPECTRAL DISTRIBUTION OF CLOUD LIGHT

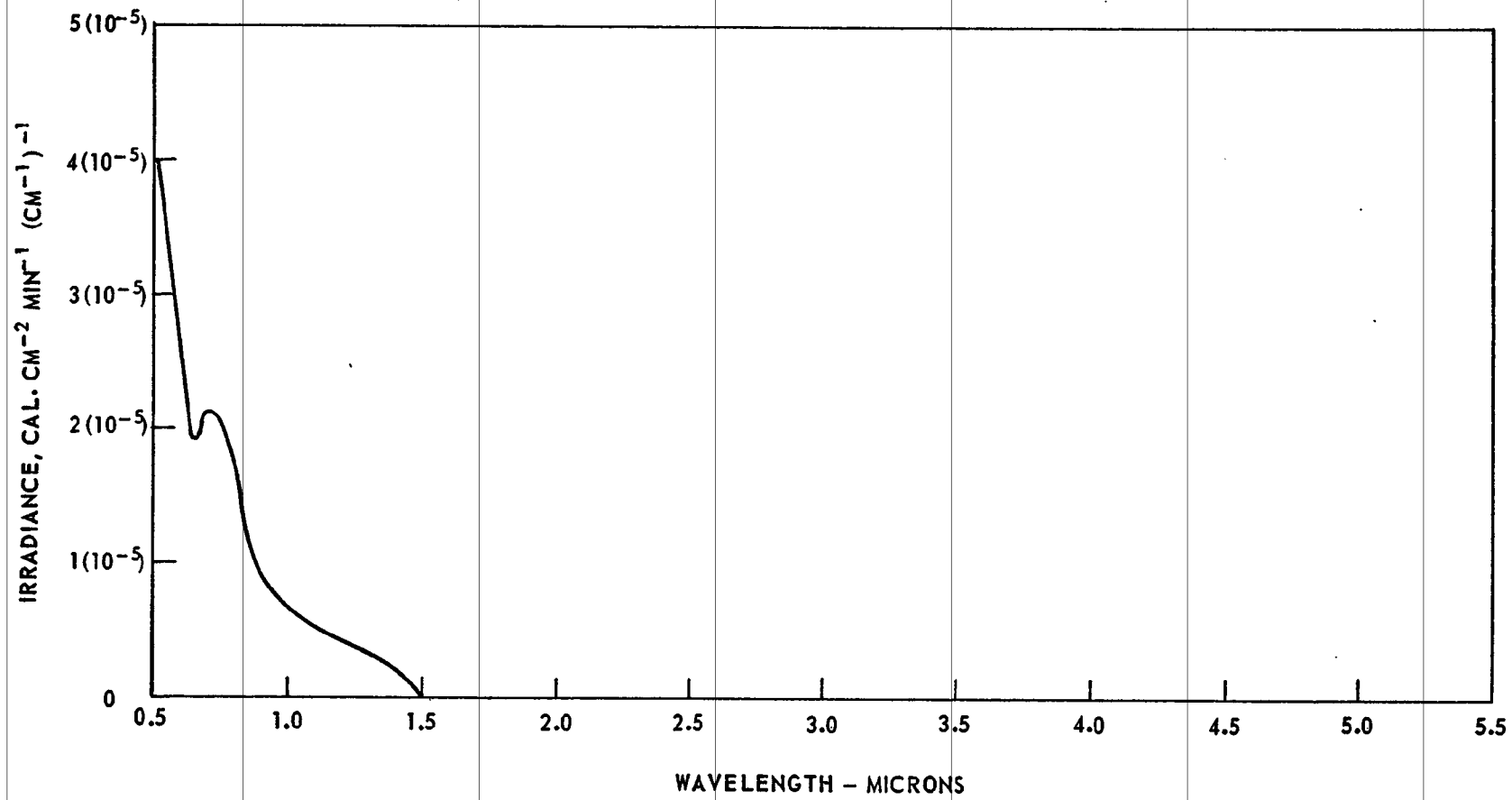
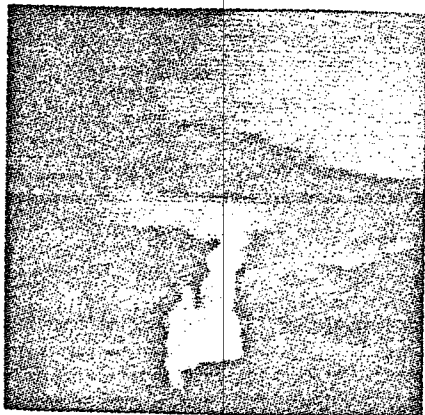
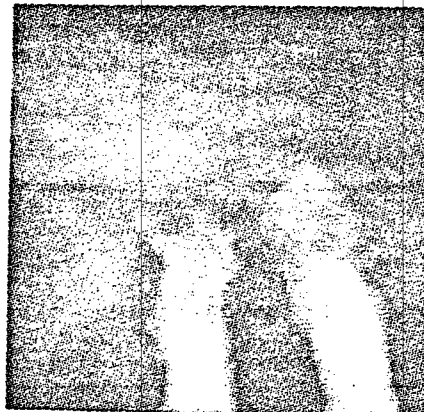


FIG. 3

PLUME IMAGES InSb DETECTOR, NO WINDOW



CAMERA SITE:
300 M SOUTH OF TURBINES



CAMERA SITE:
100 M NORTHEAST OF TURBINES

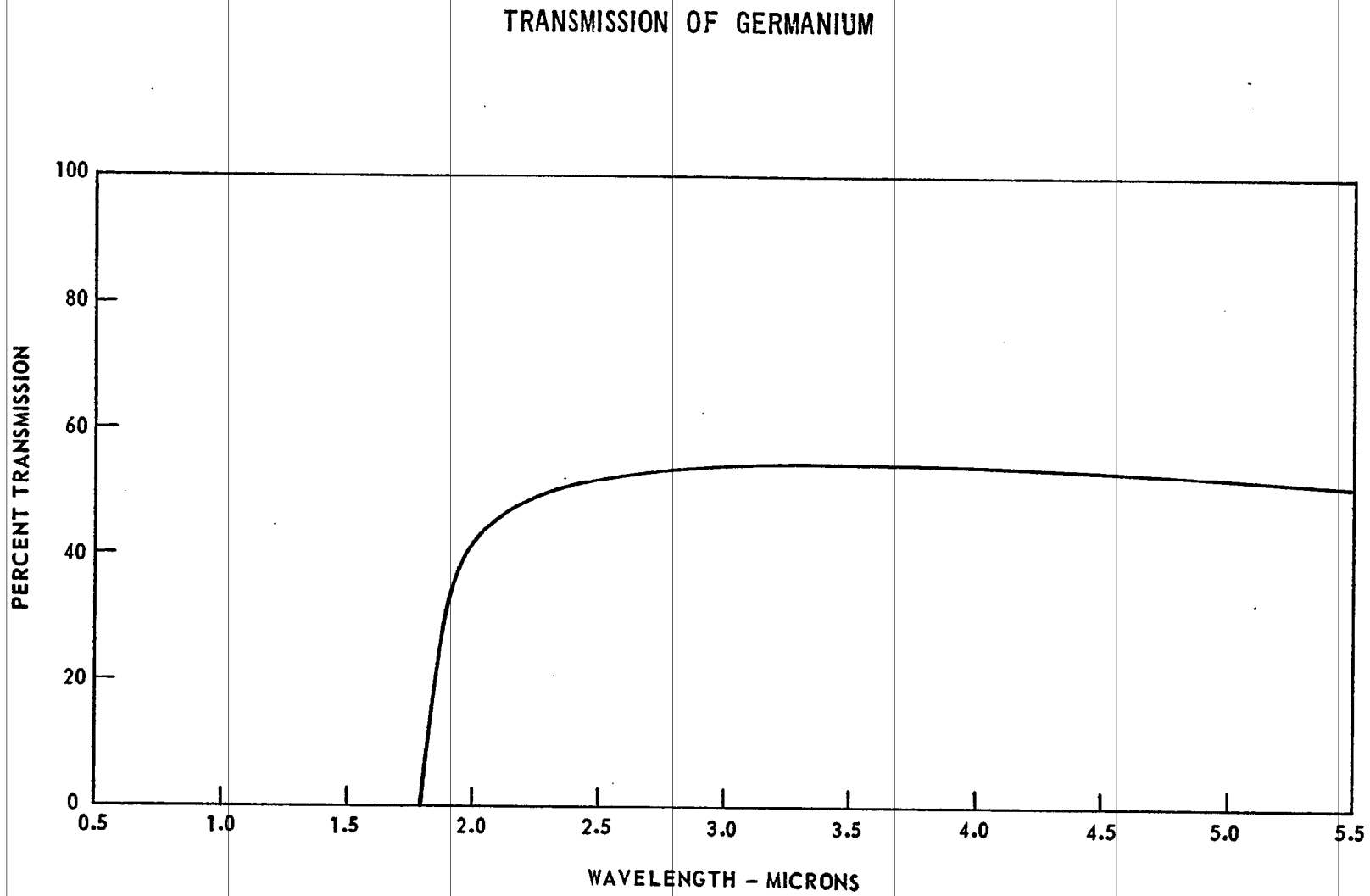
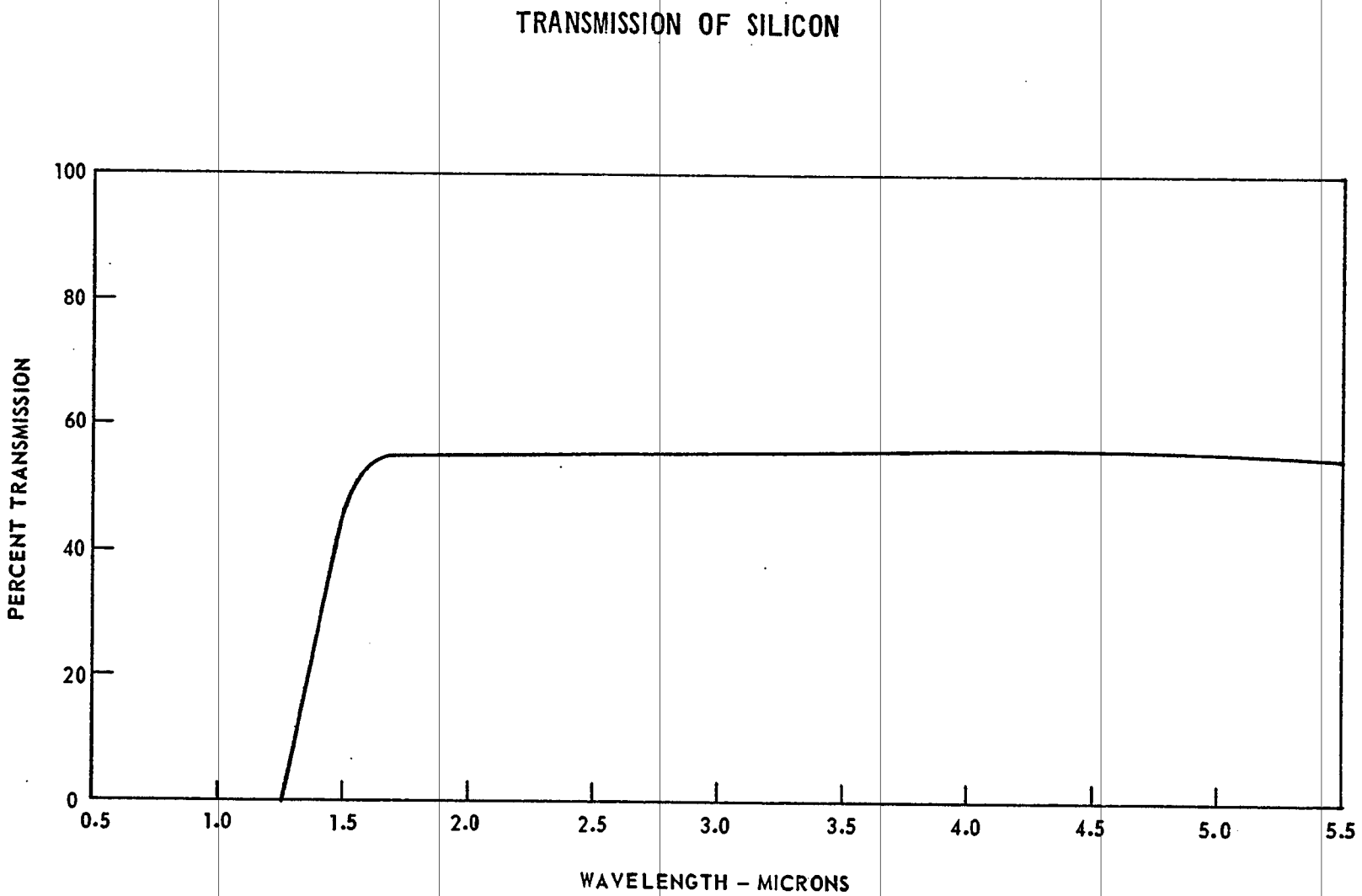
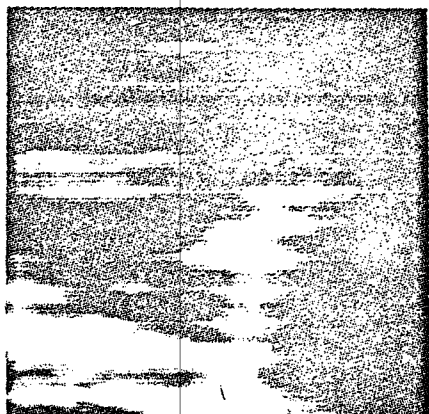
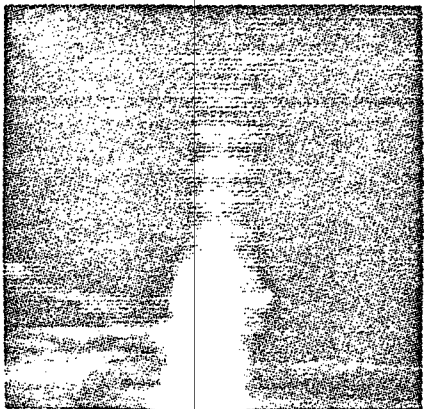
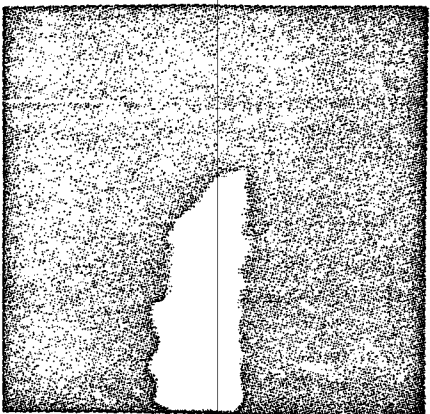


FIG. 5

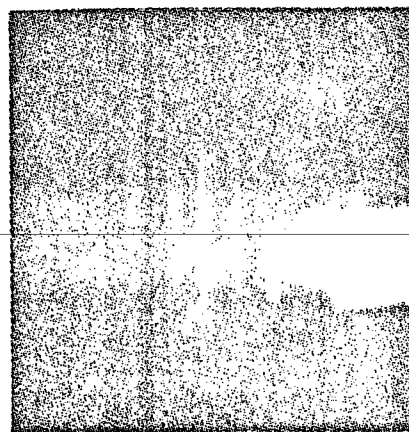
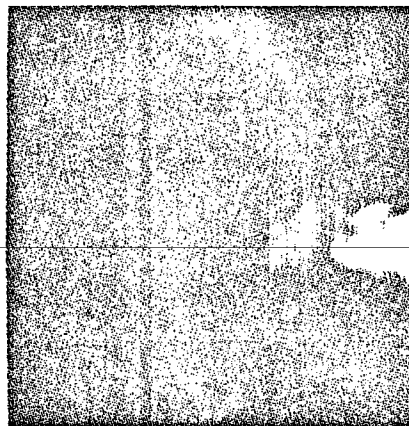


PLUME IMAGES, InSb DETECTOR, GERMANIUM WINDOW



CAMERA SITE: 300 M SOUTH OF TURBINES

PLUME IMAGES, InSb DETECTOR, SILICON WINDOW



CAMERA SITE: 300 M SOUTH OF TURBINES

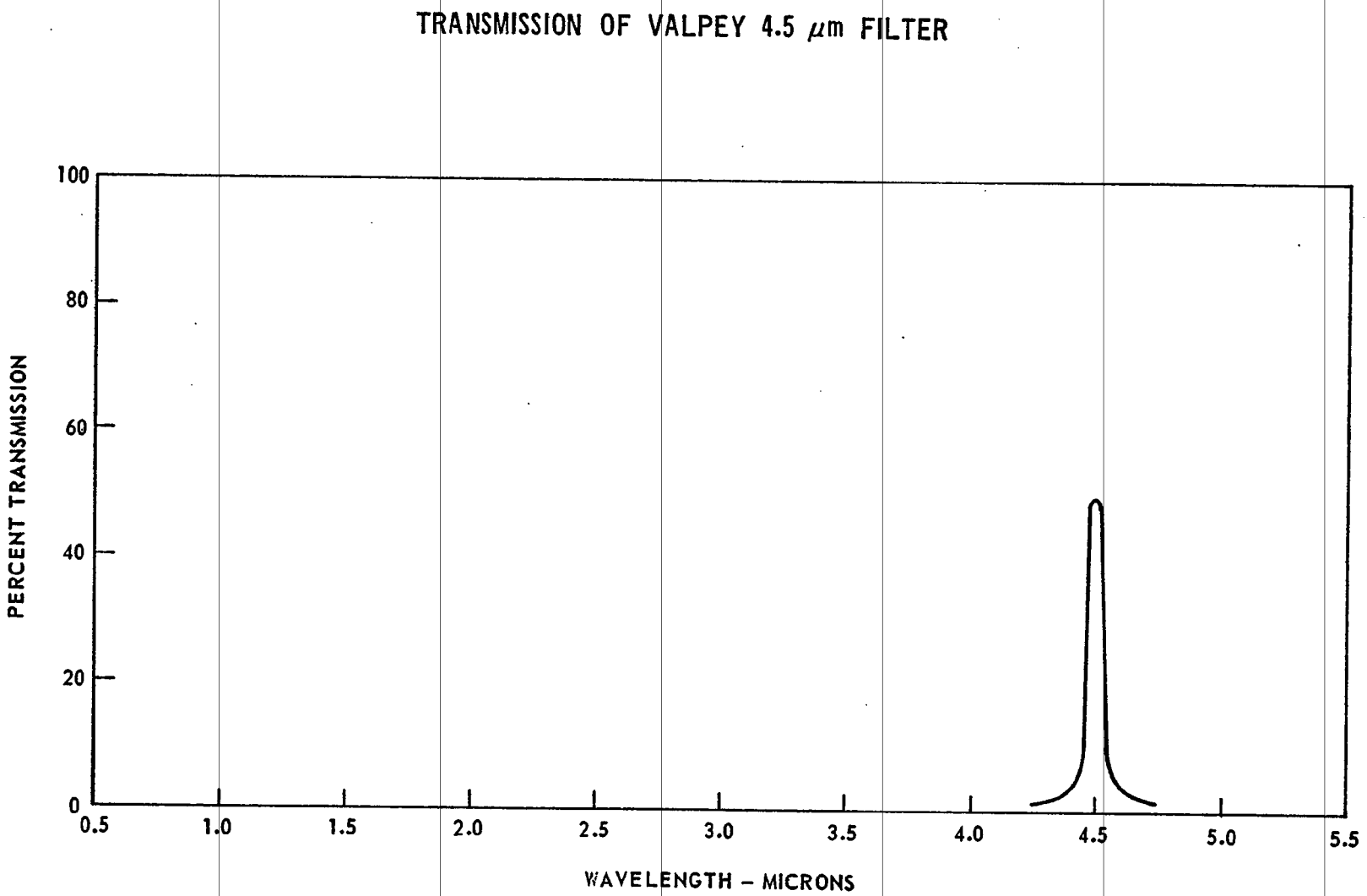


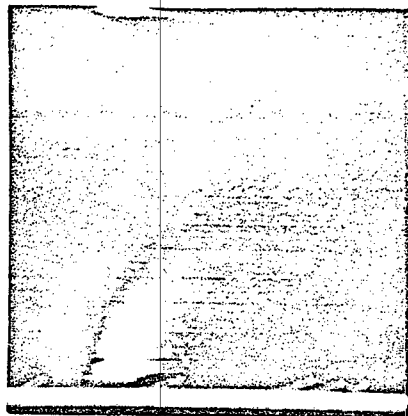
FIG. 9

PLUME IMAGES, InSb DETECTOR

NO FILTER

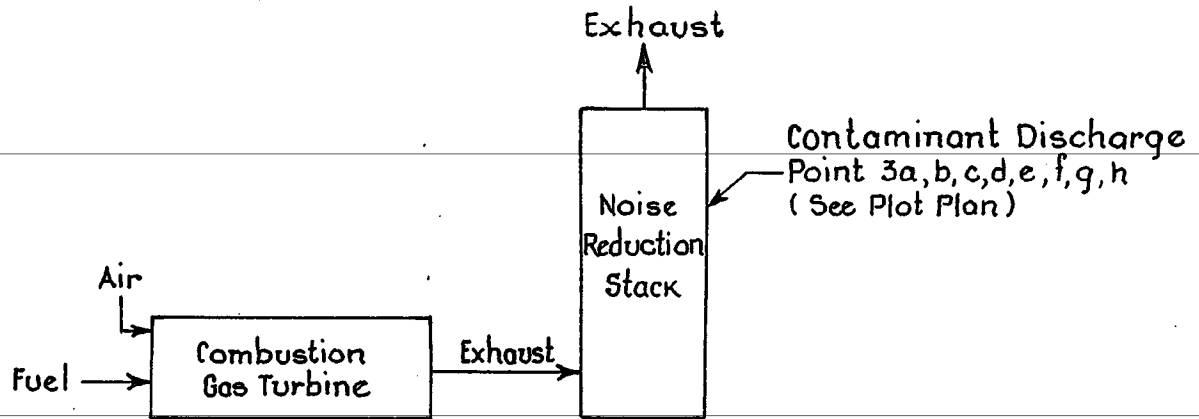


4.5 μ M FILTER



CAMERA SITE: 350 M SOUTHEAST OF TURBINES

EXHIBIT A



- a) Noise Reduction Stack.
- b) Turbo Power & Marine Systems, Inc.
FT4C1 Twin-Pac Combustion Turbine Generator.
- c) 24 Hr/day Aug-Oct est. 1000 hrs total.
4-8 p.m. 1st Dec-Jan est. 250 hrs total.
- d) 47 Feet above grade - nearest building off-site
is a residence 1600' South of the turbines and
20-30' below emission point height.
- e) & f) See attached material.

EXHIBIT C

FIELD CALIBRATION DATA

Instrument	Ranges	15 MW, 24 MW, 30 MW		
CO ₂	R-1	0-5%	Cal Gas	4.36%
CO	R-2 Low	0-100 PPM	Cal Gas	90 PPM
NO ₂	R-2	0-200 PPM	Cal Gas	62 PPM
THC	R-2	0-100 PPM	Cal Gas	81 PPM
O ₂	25%	0-25%	Cal Gas	20.6% & Amb. Air
NO	R-1	0-500 PPM	Cal Gas	177 PPM
	R-2	0-200 PPM	Cal Gas	
	15 MW Point Only			

Note: The above data are a verbatim transcription of field notes made by manufacturer personnel.

EXHIBIT D

PICTURE NO.	<u>VON BRAND REFLECTANCE NO.</u>	
	OBSERVED	CORRECTED 0.216 SCFM
1	100	100
2	100	100
3	97.2	97.9
4	96.8	97.7
5	91.1	93.5

The tape smoke measurements should be moved back one frame in order to eliminate the lag in the line for a given power condition.

March 6, 1973

The applicant expects to use, in addition to natural gas, other not yet identified types of fuel after it has been established as to each such type, that its use will comply with CWAPA standards.

COPIES TO: Messrs. Warren, Williams, Snedecor,

Phillips, Miller, GRIT - 3/1, Bredemeier, Welch, Snyder

MAR 1 - 1973

MAR 1 1973

SYSTEM CONTRACT CONSTRUCTION BRANCH

CHE. REFERENCE NO. 424

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

1010 N.E. COUCH STREET PORTLAND, OREGON 97232 PHONE (503) 233-7176

27 February 1973

Portland General Electric
621 S.W. Alder Street
Portland, Oregon 97205

Attention: A. J. Porter, Senior Vice President

Gentlemen:

In accordance with Title 21 of the Columbia-Willamette Air Pollution Authority Rules enclosed is approval of Notice of Construction N/C #376 pertaining to two 100,000 bbl. fuel storage tanks at the Harborton site. The fuels listed for use as gas turbine fuel (#2 fuel oil through JP-4) are approved for storage in these tanks. If fuels with a Reid vapor pressure greater than 4 psia are to be stored in these tanks, additional review and approval will be necessary by CWAPA.

The approval of these storage tanks should in no way be construed to mean that an air contaminant discharge permit will be issued for the proposed gas turbine installation at the Harborton site. Consequently, PGE should recognize the risk involved in constructing the storage tanks without having obtained an air contaminant discharge permit authorizing construction and operation of the gas turbine installation.

We note in your letter accompanying the permit application that you mention the gas turbines are now under construction. On 27 October 1972 we notified PGE and sent copies of our new permit regulation. We alerted you to the fact that the permit application must be submitted preferably before the required 60 days prior to construction. Further, Section 22-035(2) of our permit regulation states that "no person shall construct, install, develop or operate any new air contaminant source listed in Rule 22-045(1) without first obtaining a permit from the Authority".

We are therefore advising you that construction of the gas turbines is not allowed until an air contaminant discharge permit has been issued by this authority. We would interpret construction to mean setting the gas turbines on the foundation at the Harborton site.

BOARD OF DIRECTORS

Francis J. Ivancie, Chairman
City of Portland

Fred Stefani, Vice-Chairman
Clackamas County

Burton C. Wilson, Jr.
Washington County

Ben Padrow
Multnomah County

A.J. Ahlborn
Columbia County

Richard E. Hatchard
Program Director


Portland General Electric

Page 2

27 February 1973

Air quality aspects of the proposed gas turbine installation are presently being reviewed in conjunction with your permit application which we received on 23 February 1973. Action to grant or deny the air contaminant discharge permit for the turbines will be based on an evaluation of the facility in respect to compliance with CWAPA Rules.

Very truly yours,



R. E. Hatchard
Program Director

REH:dgs
Enclosure

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 N.E. Couch Street, Portland, Oregon 97232
Telephone: 233-7176

Reference: Your Notice of Construction and
Application for Approval, dated
17 January 1973 N/C # 376

Portland General Electric Co.
621 S.W. Alder Street
Portland, Oregon 97205

Item and Location P.G.E. Harborton fuel
storage tanks (2) 100,000 bbls each.

(1) The above application is:

- ☒ Approved.* Construction may proceed.
☐ Conditionally approved.* See NC-6

→ UPON COMPLETION OF CONSTRUCTION, PLEASE FILL OUT AND FORWARD THE ENCLOSED
NOTICE OF COMPLETION FORM (NC-4).

- ☐ Not approved. An order for the prevention of construction, installation
or establishment of the proposed facility is being issued.

(2) No further action can be taken on the application because:

- ☐ Form (enclosed) is incomplete. Please complete and return.
☐ Further information is required to complete review. Please submit:

Signed John F. Kowalczyk Title Technical Director

Date 29 January 1973

*NOTE: GRANTING APPROVAL OR CONDITIONAL APPROVAL DOES NOT RELIEVE THE OWNER OF
THE OBLIGATION TO COMPLY WITH THE RULES ADOPTED BY THIS AUTHORITY.

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232
Telephone: 233-7176

NOTICE OF COMPLETION

→ This form is to be completed and forwarded to this office upon completion of the construction, installation or establishment of:

P.G.E. Harborton fuel storage tanks (2). 100,000 bbls each

N/C 376

Date _____

Columbia-Willamette Air Pollution Authority
1010 NE Couch Street
Portland, Oregon 97232

Attention: Engineering Services

Gentlemen:

The construction, installation or establishment of the source facility or control facility described above was completed on _____ and will be in operation by _____.

Signature

Title

PORTLAND GENERAL ELECTRIC COMPANY

621 S.W. ALDER ST.

PORTLAND, OREGON 97205

ENV 7
ESTES SNEDECOR, JR.
VICE PRESIDENT

HARBORTOIV

5.1

March 7, 1973

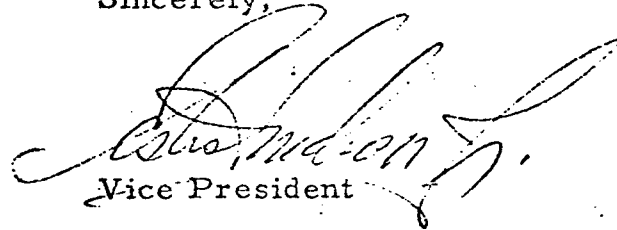
Columbia-Willamette Air Pollution Authority
1010 N. E Couch Street
Portland, Oregon 97232

Attention: Air Contaminant Discharge Permit Program

Gentlemen:

We are hereby requesting the attached Application for Air Contaminant Discharge Permit be considered for a multiple source permit.

Sincerely,


Vice President

Attach.

bc D. R. Miller ✓
D. R. Landis
R. L. Welch
A. J. Porter
H. H. Phillips
G. J. Eicher

Application No. _____

Permit No. _____

APPLICATION FOR AIR CONTAMINANT DISCHARGE PERMIT

NOTE: Prepare 4 copies, each to include all SCHEDULES and EXHIBITS
Retain 1 copy and forward 3 copies to this Authority,
attention, Air Contaminant Discharge Permit Program.

The applicant named below hereby submits this completed application and requests that the source site described herein be issued an air contaminant discharge permit for the air contaminant source(s) named in Item number 3 below:

1. Official Applicant Identification:

Company Name Portland General Electric Co.

Division Power Resources

Mailing Address 621 S. W. Alder Street

City Portland State Oregon Zip 97205

Phone Area Code 503 / 228-7181

2. Source Site Description:

Business Name Portland General Electric Co.

Plant Site Address _____

City Portland State Oregon Zip 97205

Phone (503) 228-7181

3. Air Contaminant Source(s) and fees as listed in CWAPA Rules, Title 22, for your operation are shown below. Complete and attach the information for each source as required by Schedules I, II and III of this application.

Air Contaminant Source		S.I.C. Number	AIPID Fee*	PCD Fee**
a.	8 Combustion Gas Turbines		\$ 25.00/ Turbine	\$ 225.00
b.	(multiple source permit requested)		\$	\$
c.			\$	\$
Totals			\$	\$

Submit with this application a check in the amount of \$ 200.00 payable to this Authority, for total AIPID fee plus \$25.00 filing fee. The first total PCD fee in the amount of \$ 225.00 must be paid prior to final issuance of permit and may be included with this application.

* Application, Investigation and Permit Issuing or Denying Fee

** Permit Compliance Determination Fee

COLUMBIA-WILLAMETTE AIR POLLUT. AUTHORITY
1010 NE Couch Street, Portland, Oreg. 97232
Phone: (503) 233-7176

Application No. _____

Permit No. _____

4. Person Authorized to Receive Permit:

Name A. J. Porter
Title Senior Vice President Phone: Area Code 503 / 228-7181
Address 621 S. W. Alder Street
City Portland State Oregon Zip 97205

5. Person to Contact (at plant site) for Additional Details:

Name N. H. Burman
Title Superintendent, E.M.&C. Phone: Area Code 503 / 228-7181
Address 621 S. W. Alder Street
City Portland State Oregon Zip 97205

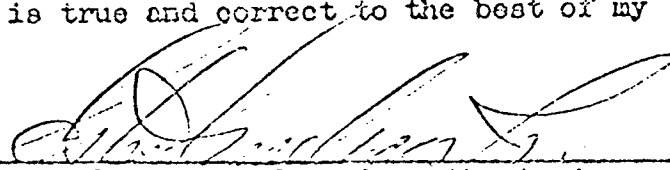
6. Status of Applicant (Check as appropriate)

 Lessee Government Agency
 Individual Owner Partnership X Corporation

7. Name and Address of the Individual Owner, Partner or Corporation's Registered Agent:

Name Warren Hastings
Title Assistant Secretary Phone: Area Code 503 / 228-7181
Address 621 S. W. Alder Street
City Portland State Oregon Zip 97205

8. Certification: I hereby certify that the information contained in this application, schedules and exhibits is true and correct to the best of my knowledge and belief.


(Signature of owner or legally authorized representative)

Vice-President
(Title)

3-7-73
(Date)

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232
Phone: (503) 233-7176

For CWAPA Use:

Application No. _____
Permit No. _____

SCHEDULE I - GENERAL DESCRIPTION OF AIR CONTAMINANT SOURCE

The information required in this schedule must be furnished for each air contaminant source listed in Item 3, page 1 of application.

Air Contaminant Source
(as listed in Item 3 of application)

S.I.C.

8 Combustion Gas Turbines

1. Air contaminant source process production rate as stated in applicable rules.

(For an air contaminant source process or any component thereof for which a specific emission standard has been adopted, state the production rate in the units delineated in the applicable section of the rules.)

Fuel burning equipment 3.0×10^9 Btu/hr input

2. Air contaminant source process production rate as generally stated in the industry:

- a. Maximum hourly production rate 254.4 MW @ 30°F
- b. Normal hourly production rate 220.8 MW @ 53°F
- c. Primary operating schedule of air contaminant source process; indicate by hours per day, days per week and weeks per year. If seasonal, indicate normal season.

See Attachment A to Schedule I

- d. Annual quantity of major material(s) processed (Use additional sheet if necessary)

Material

Amount Processed Annually

Natural Gas

See Attachment A to Sched. I

The applicant expects to use, in addition to
natural gas, other not yet identified types of
fuel after it has been established as to each
such type, that its use will comply with CWAPA
standards.

ATTACHMENT A TO SCHEDULE I

PORTLAND GENERAL ELECTRIC COMPANY
HARBORTON COMBUSTION TURBINES

1973-1974

<u>EXPECTED USE</u>	<u>JUL</u>	<u>AUG</u>	<u>SEPT</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>
Percent of time	-	40	80	80	80	80	80	60	40	1	1	1
Fuel use (Millions of Therms)	-	7.7	15.2	16.3	16.4	17.2	17.4	10.9	8.4	0.2	0.2	0.2

1974-1975

<u>EXPECTED USE</u>												
Percent of time	1	80	80	80	80	80	80	60	40	1	1	1
Fuel use (Millions of Therms)	0.2	15.4	15.2	16.3	16.4	17.2	17.4	10.9	8.4	0.2	0.2	0.2

1975-1976 (if peaking only)

<u>EXPECTED USE</u>												
Percent of time	1	1	1	5	5	10	10	5	5	1	1	1
Fuel use (Millions of Therms)	0.2	0.2	0.2	1.0	1.0	2.1	2.1	1.0	1.0	0.2	0.2	0.2

March 6, 1973

Application No. _____

Permit No. _____

SCHEDULE II - DETAILED DESCRIPTION OF AIR CONTAMINANT SOURCE

A separate set of Exhibits A and B required by this schedule must be attached for each air contaminant source named in Item 3, page 1 of application.

Source 8 Combustion Gas Turbines SIC

1. Exhibit A - Process Flow Diagram For the Air Contaminant Source Listed in Item 3, page 1 of application

Attach as Exhibit A, a process flow diagram showing relationship of process equipment, type and quantity of process materials and their point of introduction, air contaminant control equipment and air contaminant discharge points. Each air contaminant discharge point must be referenced with a unique descriptive item name. In a permit renewal or modification application, air contaminant discharge points that retain the same information as that given for the previous permit must either retain the unique descriptive item name of the previous permit or may be given a new unique descriptive item name providing that the previous permit item name is referenced.

For each air contaminant discharge point appearing in the process flow diagram, delineate the following information:

- a. Unique descriptive item name
- b. Equipment manufacturer's trade name, equipment name and/or model number
- c. Operating schedule in hours per day and days per week and weeks per year. If seasonal, indicate normal season.
- d. Height above ground level of air contaminant discharge point and distance to, height of and use of nearest structure or building.
- e. Normal discharge temperature, velocity and flow rate in Actual Cubic Feet per Minute (ACFM) and Standard Cubic Feet per Minute (SCFM). (Indicate how the information was determined and if test results give date of test.)
- f. Air contaminants emitted and emission rates. (Indicate if this information is estimated or based on emission test results. If emissions have been measured indicate date of last test.)

In addition, for fuel burning equipment and/or incineration equipment include: type of fuel and backup fuel, annual quantity of fuels used, steam capacity and amount normally produced, and/or type and annual quantity of wastes burned.

Clearly identify each exhibit as Exhibit A and reference each air contaminant source by name and number (3a, 3b, etc.) as it appears in Item 3, page 1 of application.

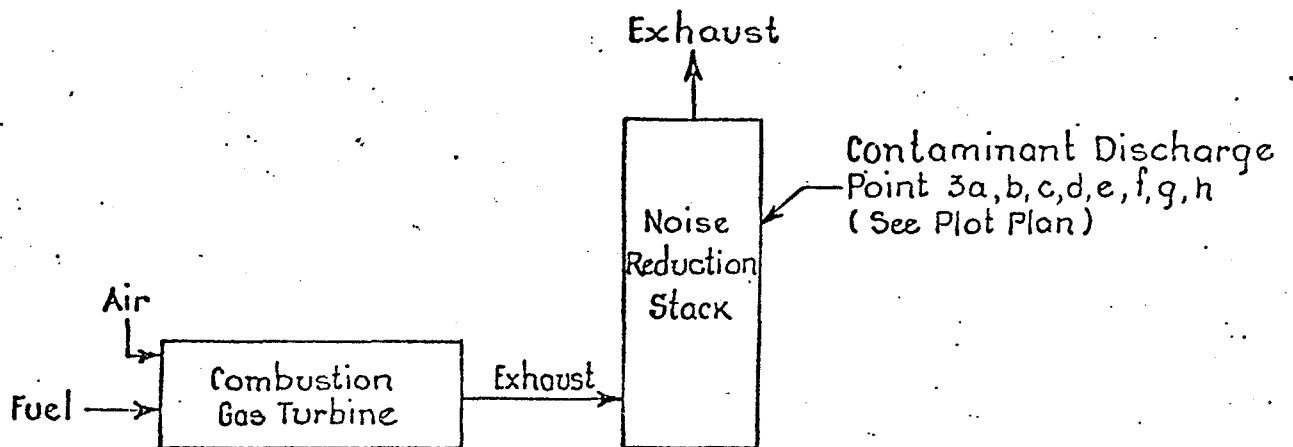
2. Exhibit B - Plot Plan For the Air Contaminant Source Listed in Item 3, page 1 of application.

A separate set of Exhibits required by this section must be attached for each air contaminant source named in Item 3, page 1 of application.

Attach as Exhibit B, a site plot plan showing the physical location of process equipment and air contaminant control equipment. Each air contaminant discharge point must be referenced with a unique descriptive item name identical to the item name used in Exhibit A. The plot plan or a second plot plan must show the location of the nearest residential and/or commercial property, structures, height of structures, road way and clearly indicate proper site access.

Clearly identify each exhibit as Exhibit B and reference each air contaminant source by name and number (3a, 3b, etc.) as it appears in Item 3, page 1 of application.

EXHIBIT A



- a) Noise Reduction Stack.
- b) Turbo Power & Marine Systems, Inc.
FT4C1 Twin-Pac Combustion Turbine Generator.
- c) See Attachment A to Schedule I.
- d) 47 Feet above grade - nearest building off-site
is a residence 1600' South of the turbines and
20-30' below emission point height.
- e) & f) See attached material.

ATTACHMENT A TO EXHIBIT A

Natural Gas Firing

	<u>Base Load</u>			<u>Peak Load</u>			<u>Reserve</u>	<u>Peak Load</u>	
Air pressure (psia)	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	
Ambient air temperature, F	<u>10</u>	<u>30</u>	<u>80</u>	<u>10</u>	<u>30</u>	<u>80</u>	<u>10</u>	<u>30</u>	<u>80</u>
Net unit output, kW	<u>64100</u>	<u>60500</u>	<u>48450</u>	<u>66800</u>	<u>63600</u>	<u>53050</u>	<u>68550</u>	<u>65600</u>	<u>55350</u>
Net total plant output, kW	<u>256400</u>	<u>242000</u>	<u>193800</u>	<u>267200</u>	<u>254400</u>	<u>212200</u>	<u>274200</u>	<u>262400</u>	<u>221400</u>
Firing temperature, F	<u>1840</u>	<u>1840</u>	<u>1840</u>	<u>1900</u>	<u>1900</u>	<u>1900</u>	<u>1940</u>	<u>1940</u>	<u>1940</u>
Exhaust gas temperature, F	<u>845</u>	<u>845</u>	<u>855</u>	<u>875</u>	<u>875</u>	<u>880</u>	<u>900</u>	<u>900</u>	<u>900</u>
Plant net heat rate, Btu/kW/hr/LHV	<u>11200</u>	<u>11225</u>	<u>11600</u>	<u>11250</u>	<u>11250</u>	<u>11450</u>	<u>11300</u>	<u>11275</u>	<u>11400</u>
Exhaust gas flow, CFM/unit x 10 ⁶	<u>1.268</u>	<u>1.218</u>	<u>1.069</u>	<u>1.305</u>	<u>1.261</u>	<u>1.127</u>	<u>1.339</u>	<u>1.292</u>	<u>1.160</u>
Exhaust gas mass flow, #/hr/unit x 10 ⁶	<u>2.31</u>	<u>2.22</u>	<u>1.935</u>	<u>2.33</u>	<u>2.25</u>	<u>2.00</u>	<u>2.340</u>	<u>2.26</u>	<u>2.024</u>
Stack exit velocity, ft/sec	<u>360</u>	<u>348</u>	<u>305</u>	<u>372</u>	<u>360</u>	<u>321</u>	<u>382</u>	<u>369</u>	<u>331</u>
Exhaust gas analysis, % wt									
O ₂	<u>16.8</u>	<u>17.0</u>	<u>17.3</u>	<u>16.6</u>	<u>16.7</u>	<u>17.1</u>	<u>16.5</u>	<u>16.6</u>	<u>16.9</u>
CO	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>	<u>.0016</u>
CO ₂	<u>4.2</u>	<u>4.1</u>	<u>3.9</u>	<u>4.3</u>	<u>4.2</u>	<u>4.1</u>	<u>4.4</u>	<u>4.4</u>	<u>4.2</u>
SO ₂	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>
SO ₃	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>	<u>Nil</u>
NO NOx as NO ₂ Less than	<u>.012</u>	<u>.013</u>	<u>.015</u>	<u>.012</u>	<u>.012</u>	<u>.014</u>	<u>.012</u>	<u>.012</u>	<u>.014</u>
NO ₂		<u>NOx as NO₂</u>						<u>NOx as NO₂</u>	
H ₂ O	<u>3.4</u>	<u>3.3</u>	<u>3.2</u>	<u>3.5</u>	<u>3.5</u>	<u>3.3</u>	<u>3.6</u>	<u>3.6</u>	<u>3.4</u>

NOTE: "Unit", as used above refers to one Twin-Pac with two FT4C1 Gas Turbines.

100
200 x 10³

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232
Phone: (503) 233-7176

Application No. _____

Permit No. _____

SCHEDULE III - ADDITIONAL PLANT SITE INFORMATION

1. Refuse Disposal Methods:

Indicate quantity and disposal method and location for each type or residue, waste or refuse generated including liquid waste from air pollution control equipment.

a. Material

- 1) Sanitary Wastes
- 2) Solid Wastes

b. Source

- 1) & 2) Plant operation and maintenance personnel and their activities

c. Quantity

- 1) 20 gal/man-day
- 2) 2 lb/man-day

d. Disposal method

- 1) On-site septic tank and subsurface disposal field
- 2) Removal by Company-owned refuse collection truck for off-site disposal

e. Disposal site

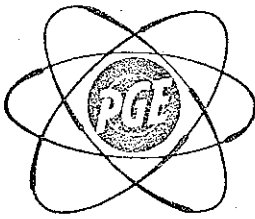
- 1) Plant property
- 2) Swift Blvd. or other municipal landfill

2. Other Air Contaminant Source(s):

Are other air contaminant source(s) located at plant site for which a permit is not being applied for at this time?

_____ No X Yes If yes, list below and briefly describe.

2 - 100,000 BBL fuel storage tanks w/floating pans, for which permit is not required.



JUL 12 1973

PORTLAND GENERAL ELECTRIC COMPANY

ELECTRIC BUILDING

621 S.W. ALDER STREET

PORTLAND, OREGON 97205

SYSTEM CONTRACT CONSTRUCTION BRANCH

FILE REFERENCE NO.

July 11, 1973

Portland City Planning Commission
424 S.W. Main Street
Portland, Oregon 97204

Re: Tax Lot 18, Section 34, T2N-RLW Harborton

Gentlemen:

You are herewith authorized in connection with the Application For Conditional Use filed this date by Portland General Electric Company for use of eight combustion turbines and four electric generators at Harborton, to enter upon the above-mentioned properties at reasonable times as authorized by the Municipal Codes of the City of Portland in considering the application of Portland General Electric Company heretofore referred to. This authorization shall also apply to members of the Planning Commission staff and shall include the right to take pictures of the premises. Pursuant to your request, a copy of this authorization will be directed to personnel at Harborton.

Very truly yours,

PORTLAND GENERAL ELECTRIC COMPANY

By:

A. J. Foster

Vice President

PORTLAND CITY PLANNING COMMISSION

APPLICATION FOR CONDITIONAL USE
(to be filled out in duplicate)

For office use only

UCL	EC	EV
TCL	MC	

I hereby apply for the following Conditional Use: (describe fully) _____

For use of eight combustion turbines and four electric generators at
Harborton.

On property described as: LOT(s) Tax Lot 18

BLOCK Sec. 34 ADDITION T2N-R1W

which is located at Multnomah Channel and Willamette River North of
Monneville R of W, East of S. P. & S. R of W.
near (cross street) _____ in Zone M1

I agree to furnish three copies of a site plan drawing showing exact dimensions and arrangement of the proposed development and any other drawings, topographic surveys, photographs or other material essential to the understanding of the proposed use and its relationship to surrounding properties as may be required by the Planning Commission.

PORTLAND GENERAL ELECTRIC COMPANY

DEEDHOLDER(s)
(signatures must appear)

By: /s/ Joseph L. Williams
~~XXXXXXXXXXXX~~

621 S.W. Alder St., Portland, Oregon
Address and Phone Number 222-9821

CONTRACT PURCHASER(s) (if any)
(signatures must appear)

Husband and Wife

Address and Phone Number

OPTIONAL PURCHASER OR RENTER (if any)
(signatures must appear)

Husband and Wife

Address and Phone Number

P. C. File No: _____

Quarter Section: _____

Explain fully why you consider this conditional use to be in the best interests of the public and the immediate neighborhood. The described area has adequate traffic, sewage and water facilities for the use requested.

It is located on real property zoned M1 industrial use. It is situated next to the Willamette River at Harborton near the division line between Multnomah and Columbia Counties. The surrounding area is predominately industrial and provides easy access for natural gas to be supplied by pipeline and oil to be supplied by oil pipeline, tanker, or railcar. The site is geographically the closest and most environmentally compatible area for use as an electric generating site near the Portland load centers. The use of the combustion turbines on the site is subject to regulation by the Department of Environmental Quality for the State of Oregon. Applicant anticipates the approval of the Department of Environmental Quality as to the use requested.

The combustion turbines are needed to provide electric power and energy during short supply periods, peak demand periods, and to provide power reserves to meet emergency requirements in and around the metropolitan area of the City of Portland, Oregon.

Supplemental and detailed summary and additional data and information will be submitted.

Permit Number: 26-2400
Expiration Date: 9/1/75
Page 1 of 9

AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696
Issued in accordance with the provisions of
ORS 449.727

[Signature]

NOV 5 1973

SYSTEM CONTRACT CONSTRUCTION BRANCH
FILE REFERENCE NO. K24.0

ISSUED TO:
PORTLAND GENERAL ELECTRIC CO.
Power Resources
621 S. W. Alder
Portland, OR 97205
PLANT SITE:

Harborton Plant
One Mile North of Linnton
off St. Helens Road

ISSUED BY DEPARTMENT OF
ENVIRONMENTAL QUALITY

[Signature]
Diarmuid F. O'Spallain
Director

25 SEP 1973
Date

REFERENCE INFORMATION

Application No. 0222
Date Received 3 July 73

Other Air Contaminant Sources at this Site:

	Source	SIC	Permit No.
(1)			
(2)			

SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:

Name of Air Contaminant Source

Standard Industry Code as Listed

Permitted Activities

Until such time as this permit expires or is modified or revoked, PORTLAND GENERAL ELECTRIC CO. is herewith permitted in conformance with the requirements, limitations and conditions of this permit to discharge treated exhaust gases containing air contaminants from its eight (8) Pratt and Whitney (FT4C-1 combustion turbines) fuel burning devices located at the Harborton substation approximately one (1) mile north of Linnton, Oregon, including emissions from those processes and activities directly related or associated thereto.

Compliance with the specific requirements, limitations and conditions contained herein shall not relieve the permittee from complying with all rules and standards of the Department and the laws administered by the Department.

PROPOSED
AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
Issued by the
Department of Environmental Quality for
PORTLAND GENERAL ELECTRIC CO. (Harborton)

Expiration Date: 2/1/75
Page 2 of 9
Appl. No.: 0222
File No.: 26-2479

1. Performance Standards and Emission Limits

- 1.1 The permittee shall at all times maintain and operate all air contaminant generating processes and all contaminant control equipment at full efficiency and effectiveness such that the emission of air contaminants are kept at the lowest practicable levels.
- 1.2 When the turbines are fired with natural gas, emissions of air contaminants shall not exceed any of the following:
 - 1.2.1 An opacity (as defined by OAR, Chapter 340 Section 21-005(4)) equal to or greater than ten percent (10%) for a period or periods aggregating more than three (3) minutes in any one (1) hour from any single turbine plume or combination of turbine plumes,
 - 1.2.2 The maximum allowable emission rates of particulate matter from any single combustion turbine shall be a function of heat input as determined from Figure 1 of this permit for new sources,
 - 1.2.3 3.13 pounds per hour of particulate matter for any single turbine,
 - 1.2.4 188 pounds per hour of Nitrogen Oxide (NO_x) for any single turbine,
 - 1.2.5 1.3 pounds per hour of Sulfur Dioxide (SO_2) for any single turbine, or
 - 1.2.6 15.6 pounds per hour of Carbon Monoxide (CO) for any single turbine.
- 1.3 When the turbines are fired with distillate fuel oil, emissions of air contaminants shall not exceed any of the following:
 - 1.3.1 An opacity equal to or greater than ten percent (10%) for a period or periods aggregating more than three (3) minutes in any one (1) hour, for any single turbine plume or combination of turbine plumes,
 - 1.3.2 The maximum allowable emission rates of particulate matter from any single combustion turbine shall be a function of heat input as determined from Figure 1 of this permit for new sources,
 - 1.3.3 31.3 pounds per hour of particulate matter for any single turbine,
 - 1.3.4 355 pounds per hour of Nitrogen Oxide (NO_x) for any single turbine,
 - 1.3.5 105 pounds per hour of Sulfur Dioxide (SO_2) for any single turbine,
 - 1.3.6 15.2 pounds per hour of Carbon Monoxide (CO) for any single turbine, or
 - 1.3.7 Smoke spot number 2 as measured by the American Society for Testing Material procedure D2156-65 for any single turbine.

PROPOSED
AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
Issued by the
Department of Environmental Quality for
PORTLAND GENERAL ELECTRIC CO. (Harborton)

Expiration Date: 9/1/75
Page 3 of 2
Appl. No.: 0222
File No.: 26-2499

1. Performance Standards and Emission Limits (continued)

- 1.4 Sound pressure levels emitted from the turbines shall not exceed the limitations specified in Table I of this condition, when measured at any location 400 feet from the geometric center of the turbine engine installation. Sound pressure levels may be measured at a distance other than 400 feet and corrected, according to the inverse square law, to a reference distance of 400 feet.

Table I

Maximum Sound Pressure Levels at 400 Feet

<u>Frequency - Center of Octave Band, Hz</u>	<u>Sound Pressure Level-db</u>
31.5	79
63	73
125	67
250	59
500	54
1,000	50
2,000	48
4,000	46
8,000	44
Overall	81

2. Special Conditions

- 2.1 Fuel usage shall conform to the following:

- 2.1.1 In no event shall permittee operate the Harborton facilities in excess of the total projected annual hours illustrated in Table II.
- 2.1.2 Without obtaining prior written approval from the Department the permittee shall not operate its turbines using natural gas as fuel for more hours per month than that listed as "projected operation" "gas hours" on Table II.
- 2.1.3 Fuels other than natural gas shall not be used without prior specific approval by the Department. In no event shall the Department approve operation of turbines using distillate fuel oil, or any other fuel other than natural gas, for more hours per month than that listed as "projected operation" "oil hours" on Table II.
- 2.1.4 Natural gas shall be utilized to the maximum extent possible. In no event shall the Department approve use of distillate fuel oil in any month until the natural gas quota for that month, as shown in Table II of this permit, is either first used or is clearly forecasted, by the permittee and agreed to by the Department, to be totally used.

PROPOSED

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

Issued by the
Department of Environmental Quality for
PORTLAND GENERAL ELECTRIC CO. (Harborton)

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- 2.1.5 The Department and the permittee shall limit usage of distillate fuel oil to periods of most favorable ventilation and dispersal of air contaminants and use of fuels other than natural gas is prohibited during actual or forecasted periods of poor ventilation and poor dispersal of air contaminants.
- 2.1.6 Any fuel oil used shall be the lowest sulfur content distillate fuel oil available, but in no case shall distillate fuel oil with a sulfur content greater than 0.3% be used.
- 2.1.7 The permittee shall always start the combustion turbines on natural gas regardless whether sustained operation will be on oil or gas. To the extent that natural gas is available the permittee shall shut the turbines down utilizing natural gas.
- 2.1.8 The permittee shall cease operation of all combustion turbines on oil when notified by the Department that adverse meteorological conditions are forecasted or particulate or sulfur dioxide (SO_2) air quality levels at any affected monitoring site operated or required by the Department in the Portland metropolitan areas has reached or is expected to reach 142 micrograms of suspended particulate matter per cubic meter of air (24 hour average), 247 micrograms of sulfur dioxide (SO_2) per cubic meter of air (24 hour average) or 1,235 micrograms of SO_2 per cubic meter of air (3 hour average) and the permittee shall not resume operation on oil until specifically authorized by the Department.
- 2.2 No combustion turbine shall be operated for more than 1 hour in any 24 hour period, on any fuel at a power output greater than 30 megawatts or less than 15 megawatts (30°F. ambient basis) except for start-up or shut-down operation.
- 2.3 The permittee shall cease operation of all combustion turbines whether oil or gas fired when notified by the Department that photochemical oxidant air quality levels at any affected monitoring site operated or required by the Department has reached or is expected to reach 152 micrograms per cubic meter of air (1 hour average), 263 micrograms of nitrogen dioxide (NO_2) per cubic meter of air (24 hour average), or 1,075 micrograms of NO_2 per cubic meter of air (1 hour average), and the permittee shall not resume operation of the turbines on oil or gas until specifically authorized by the Department.
- 2.4 The permittee shall submit plans to the Department for review and approval of easily accessible facilities for obtaining fuel oil samples in the turbine fuel oil feed lines. These plans must be approved and facilities installed prior to operation of the combustion turbines.
- 2.5 The permittee shall submit plans to the Department for review and approval of easily accessible smoke spot sample ports for each combustion turbine. These plans must be approved and facilities installed prior to operation of the combustion turbines.

ACTION
NEEDED

ACTION
NEEDED

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

Issued by the

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PORTLAND GENERAL ELECTRIC CO. (Harborton)

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2.6 The permittee shall file with the Department by no later than January 1, 1974, a detailed schedule (similar to Table II of this permit) of the projected operating time and fuel use for the period July 1, 1974 until the P.G.E. Trojan nuclear power facility become operational, or September 1, 1975, whichever time first occurs.

2.7 Following a public hearing on the projected future operational schedule referred to in condition 2.6, the Department shall modify this permit by issuing an addendum thereto, which shall specify an approved operating schedule and such other conditions as may be determined to be appropriate.

2.8 The permittee shall not operate the combustion turbine facilities at the Harborton site after the P.G.E. Trojan nuclear power facility becomes commercially operational or after September 1, 1975, whichever time first occurs.

3 Compliance Schedule

3.1 The permittee shall submit test data demonstrating compliance with the emission limits set forth in conditions 1.2, 1.3 and 1.4 of this permit by no later than December 1, 1973. Should any of these test data or tests or observations made by the Department indicate non-compliance the permittee shall take immediate steps, including but not limited to, curtailment of operation to bring the facility into compliance.

3.2 The permittee shall as soon as practicable, as determined by the Department, retro-fit a system to reduce nitrogen oxide (NO_x) emissions from each combustion turbine to no more than 55 ppm by volume NO_x (expressed as NO₂) referenced to 15 percent oxygen, when firing gas and to no more than 75 ppm by volume NO_x (expressed as NO₂), referenced to 15 percent oxygen, when firing oil. Reports of progress regarding development of NO_x reduction systems shall be submitted to the Department at least quarterly.

3.3 The permittee shall submit plans and specifications to the Department for review and approval for NO_x control hardware prior to retro-fitting each turbine.

4 Monitoring and Reporting

4.1 The permittee shall effectively monitor the operation and maintenance of each combustion turbine. Unless otherwise specified in writing information shall be collected and submitted for each turbine in accordance with procedures filed by the permittee and approved by the Department and shall include, but not necessarily be limited to, the following parameters and testing frequencies:

Time of operation,

Quantities and types of fuel used related to time of operation,

Electrical output related to time of operation,

Fuel additives used related to time of operation,

Smoke spot, daily when operated on oil,

Nitrogen Oxides (NO_x): continuous when operating, and

Carbon Monoxide (CO): continuous when operating.

4.2 The permittee shall document to the Department, by type, in a manner that will permit accurate computation of SO₂ emissions resulting from turbine operations, the sulfur content of all fuel oils utilized.

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

Issued by the

Department of Environmental Quality for

PORTLAND GENERAL ELECTRIC CO. (Harborton)

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*ACTION
REQUIRED*
4.3 The permittee shall install and operate in the Harborton area an ambient air monitoring program, that has been approved by the Department, to continuously determine ground-level concentrations of particulates, SO₂, CO, oxides of nitrogen and meteorological parameters. The program shall be in operation prior to commercial operation.

4.4 The permittee shall conduct other emission tests and report the results thereof as may be specified in writing by the Department.

*ACTION
REQUIRED*
4.5 Unless otherwise specified in writing by the Department the permittee shall at all times maintain available for inspection at the site and shall submit all data required to be collected under conditions 4.1, 4.2 and 4.3 not later than fifteen (15) days after the end of each calendar month of operation.

*ACTION
REQUIRED*
6 The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

The nature and quantity of increased emissions that have occurred or are likely to occur,

The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,

The corrective action that is proposed to be taken, and

The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

5. General Conditions

5.1 The permittee is prohibited from conducting any open burning at the plant site.

5.2 The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.

5.3 The permittee shall at all times conduct dust suppression measures to meet the requirements set forth in "Fugitive Emissions" and "Nuisance Conditions" as defined in OAR, Chapter 340, Section 21-050.

5.4 (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

Issued by the

Department of Environmental Quality for

PORTLAND GENERAL ELECTRIC CO. (Harborton)

Expiration Date: 9/1/75

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- 5.5 The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas at all reasonable times for the purposes of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emission discharge records and otherwise conducting all necessary functions related to this permit.
- 5.6 The permittee is prohibited from altering, modifying or expanding the subject facilities so as to affect emissions to the atmosphere without prior notice to and approval by the Department.
- 5.7 The permittee shall be required to make application for a new permit prior to substantial modification, alteration, addition or enlargement of the subject facilities which would have a significant impact on air contaminant emission increases or reductions at the plant site.
- 5.8 This permit is subject to revocation for cause, as provided by law, including:
- Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
 - Violation of any of the requirements, limitations or conditions contained herein; or
 - Any material change in quantity or character of air contaminants emitted to the atmosphere.
- 5.9 The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

Amount Due

\$200.00

Date Due

October 1, 1974

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
 Issued by the
 Department of Environmental Quality for
 PORTLAND GENERAL ELECTRIC CO. (Harborton)

Expiration Date: 9/1/75
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 Appl. No.: 0222
 File No.: 26-2499

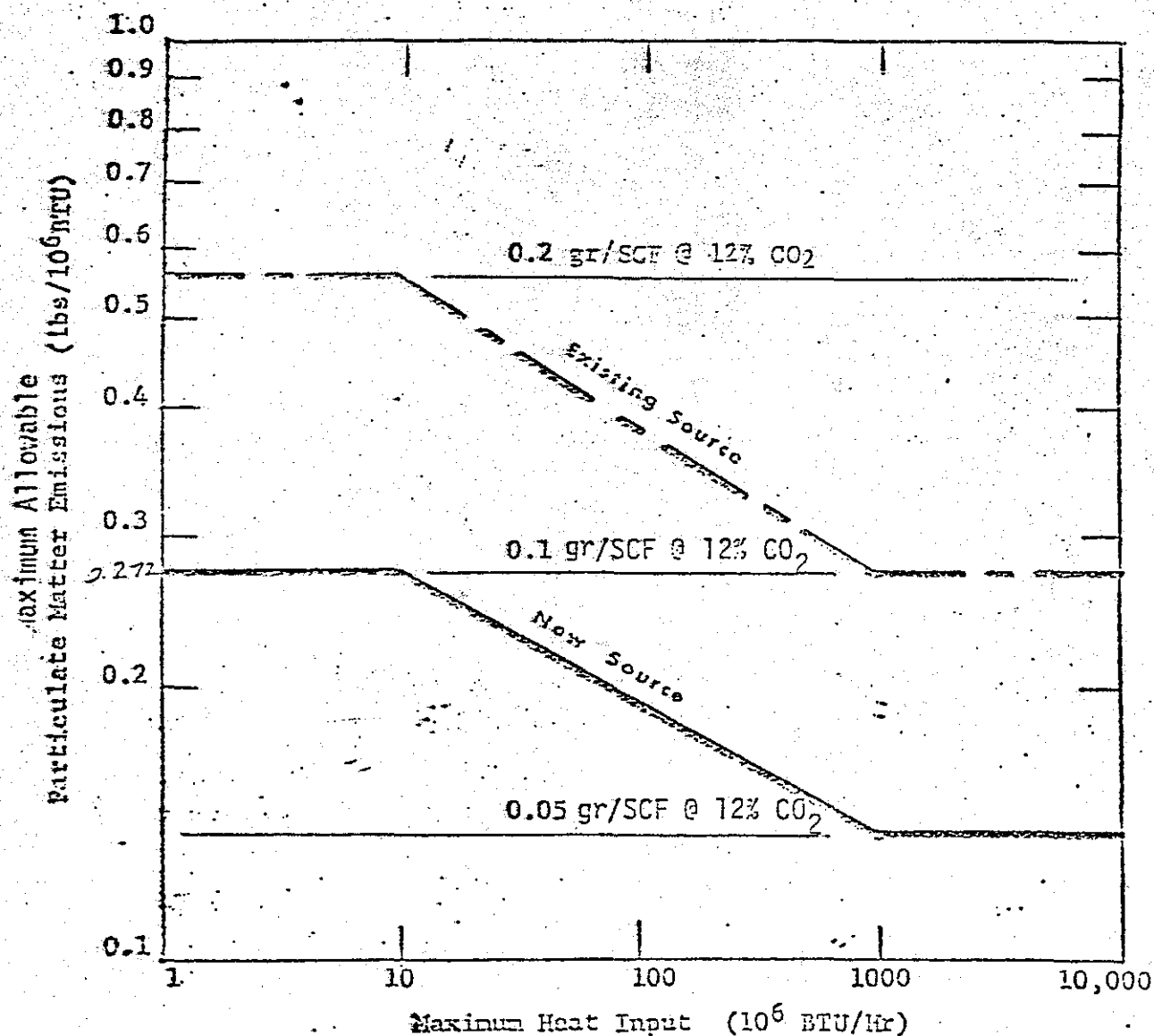
PORTLAND GENERAL ELECTRIC COMPANY
 HARBORTON COMBUSTION TURBINE OPERATING ESTIMATE
 1973-1974

	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>TOTAL</u>
Base Load Rating, MW	207	208	212	220	228	232	234	231	227	222	217	212	
PROJECTED OPERATION													
Gas, MW	-	-	169	175	150	117	121	107	100	51	20	21	1041
Oil, MW	-	-	-	-	-	13	13	13	13	2	-	-	54
Gas, % of Time	-	-	79.7	79.5	70.2	50.4	51.7	46.3	44.1	23.0	9.2	9.9	46.3
Oil, % of Time	-	-	-	-	-	5.6	5.6	5.6	5.7	0.9	-	-	2.3
Gas Hours	-	-	570	590	510	380	380	310	330	160	70	70	3370
Oil Hours	-	-	-	-	-	40	40	40	40	10	-	-	170
Total Hours	-	-	570	590	510	420	420	350	370	170	70	70	3540
FUEL USE													
Gas - T x 10 ⁶	-	-	15.2	16.3	14.4	10.9	11.2	9.0	9.3	4.6	1.8	1.9	94.6
Oil - bbl x 10 ³	-	-	-	-	-	19.8	20.0	17.8	19.4	2.7	-	-	79.7

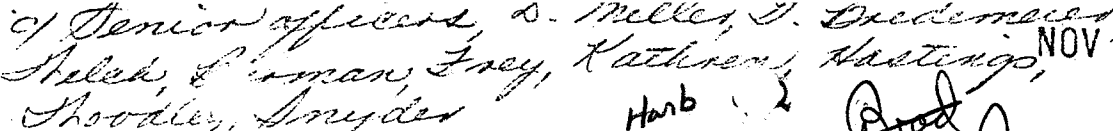
AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
Issued by the
Department of Environmental Quality for
PORTLAND GENERAL ELECTRIC CO. (Harborton)

Expiration Date: 9/1/75
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FIGURE I



PARTICULATE MATTER EMISSION STANDARDS FOR FUEL BURNING EQUIPMENT



RECEIVED

NOV 8 1974

D. R. MILLER, Manager
SYSTEM ENGINEERING

NORTHWEST REGION

1010 N.E. COUCH STREET • PORTLAND, OREGON • 97232 • (503) 238-8471

November 6, 1974

TOM McCALL
GOVERNOR

KESSLER R. CANNON
Director

E. J. WEATHERSBEE
Region Administrator

Portland General Electric Company
621 S. W. Alder
Portland, Oregon 97205

Attention: Mr. A. J. Porter

Re: AQ - PGE Harborton
Multnomah County

Gentlemen:

Attached is Addendum No. 1 to the Air Contaminant Discharge Permit for the Portland General Electric Company's turbine generator facility at Harborton. Addendum No. 1 has been prepared in accordance with permit condition 2.7 and in consideration of testimony at the public hearing of June 28, 1974, and information subsequently submitted to the Department by PGE. This addendum incorporates PGE's projected operating hours schedule as submitted December 28, 1973. Also, you will find adjusted emission limitations, noise compliance schedule, and an air monitoring program requirement. Particulate and CO emission limits when gas firing have been adjusted to levels which appear reasonable for configuration 1 combustor cans. Of the six combustors tested configuration 2 combustor cans appear to produce the best overall emission control particularly with respect to particulates and NOx emissions and when the facility is oil fired which is the most likely case in the future. Before any combustor cans are replaced on Harborton turbines for NOx control or maintenance and before final siting of the facility is determined and after air quality impact is accurately assessed, the Department may require emission limits at least as restrictive as those demonstrated by configuration 2.

This amendment shall become effective twenty (20) days after the date of mailing this letter unless within that time the permittee requests a hearing before the Environmental Quality Commission or its authorized representative.

If you have any questions, please contact Mr. John Kowalczyk at 238-8471.

Very truly yours,

KESSLER R. CANNON
Director

JFK:lb

Encl.

cc: George Eicher
cc: Air Quality Div.

E. J. Weathersbee, Administrator
Northwest Region



AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696
Issued in accordance with the provisions of
ORS 468.310

ISSUED TO: Portland General Electric Co. Power Resources 621 S.W. Alder Portland, Oregon 97205 PLANT SITE: Harborton Plant One mile north of Linnton off St. Helens Road	REFERENCE INFORMATION Application No. 0222 Date Received 3 July 1973
--	---

ADDENDUM NO. 1

In accordance with Oregon Administrative Rules 340-20-033.02, Air Contaminant Discharge Permit Number 26-2499 is modified as follows:

Condition No. 1.2.3 is replaced by the following new condition:

1.2.3 7 pounds per hour of particulate matter for any single turbine.

Condition No. 1.2.6 is replaced by the following new condition:

1.2.6 165 pounds per hour of Carbon Monoxide (CO) for any single turbine.

Condition No. 1.4 is replaced by the following new condition:

1.4 Sound pressure levels emitted from the turbines shall not exceed limitations specified in Section 35-035(f) of the Department's noise control regulations adopted by the Environmental Quality Commission on September 4, 1974.

Condition No. 2.1.8 is added as the following new condition:

2.1.8 The permittee shall not operate its turbines using natural gas as a fuel for more hours per month than listed as "Equivalent Base Load Hours" on Table III (attached).

Condition 2.1.9 is added as the following new condition:

2.1.9 The permittee shall submit to the Department for review and approval a detailed operating and fuel use schedule for each month by the 15th day of the preceding month.

Condition 2.9 is added as the following new condition:

2.9 The permittee shall minimize use of the combustion turbine facility to the greatest extent possible.

Condition 2.10 is added as the following new condition:

2.10 The Department shall restrict operating hours and/or power output levels at any time if noise levels present a significant problem prior to installation of mufflers to meet requirements of Section 1.4 of this permit.

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

Issued by
Department of Environmental Quality for

Expiration Date: Sept. 1, 1975

Addendum No. 1 Page 2 of 3

Appl. No.: 0222

File No.: 26-2499

Portland General Electric Co. (Harborton)

Addendum No. 1 (continued)

Condition 3.4 is added as the following new condition:

3.4 The permittee shall provide noise controls (mufflers) for the combustion turbines so as to limit sound pressure levels in accordance with condition 1.4 and the following schedule:

- a. By no later than December 1, 1974, commence construction and/or modification work.
- b. By no later than January 31, 1975, complete all construction and demonstrate that the combustion turbines are operated in compliance with condition 1.4.

Condition 4.7 is added as the following new condition:

4.7 The permittee shall by November 30, 1974, submit to the Department for review and approval a special air monitoring program for implementation by December 31, 1974, which will define actual air quality impact of the facility including plume rise under various meteorological conditions including worst ventilation conditions.

Condition 4.8 is added as the following new condition:

4.8 The permittee shall submit to the Department by the first of each month beginning December 1, 1974, reports detailing the progress towards achieving compliance with condition 2.8 of this permit.

ADDENDUM NO. 1 (Continued)

Table III is added as the following:

TABLE III

PORTLAND GENERAL ELECTRIC COMPANY

HARBORTON COMBUSTION TURBINE OPERATING ESTIMATE

1974 - 1975

	Jul 1974	Aug	Sep	Oct	Nov	Dec	Jan 1975	Feb	Mar	Apr	May	Jun	Jul	Aug
Base Load Rating, MW	207	208	212	220	228	232	234	231	227	222	217	212	207	208
Projected Operation, MW	165	166	169	176	182	185	188	185	182	178	173	170	165	166
Equivalent Base Load Hours	595	595	576	595	576	595	595	538	595	576	595	576	595	595
Fuel Use:														
If all gas - therms x 10 ⁶	15.3	15.4	15.2	16.4	16.3	17.2	17.5	15.5	16.9	16.0	16.1	15.3	15.3	15.4
If all oil - bbl. x 10 ³	250	251	247	266	266	280	284	253	275	260	262	249	250	251

This addendum shall be attached and made part of Air Contaminant Discharge Permit Number 26-2499.

DEPARTMENT OF ENVIRONMENTAL QUALITY

By

E. J. Weather

Title

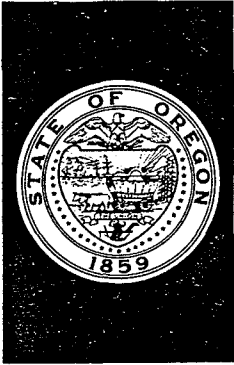
Administration N.W. Region

Date

11/6/74

Copies to: Messrs. Snedecor, Porter, Phillips, Miller,
Welch, Snyder

412
Reg.



ROBERT W. STRAUB

GOVERNOR

KESSLER R. CANNON
Director

DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JUL 8 1975

D. R. MILLER
Asst. Vice President

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-

June 24, 1975

Portland General Electric Company
Electric Building
Portland, Oregon 97205

Attn: Mr. George J. Eicher, Manager Re: File 05-2520
Dept. of Environmental Services

Gentlemen:

This will acknowledge receipt of your letter of June 9, 1975, in which you requested modification of Air Contaminant Discharge Permit No. 05-2520, Section 3.5 to read as follows:

3.5 On December 31, 1975 or before, the NO_x control system shall be completely installed and in operation.

Based upon the information submitted concerning the Belco Pollution Control Corp. not being able to install their portion of the water injection system on schedule, the Department agrees to the above modification and has enclosed Addendum No. 1. Please attach Addendum No. 1 to your Air Contaminant Discharge Permit No. 05-2520.

This addendum shall become effective twenty (20) days after the date of mailing of this letter, unless within that time you request a hearing before the Environmental Quality Commission or its authorized representative.

If you have any questions, please contact Tom Bispham of the Portland Region Office at 238-8471.

Cordially,

KESSLER R. CANNON
Director

H. M. Patterson, Assistant Director
Air Quality Control

HMP:mh
cc: Portland Region Office
Enc.

Copy to A. Porter, B. Snyder

cc: DR MILLER

7-15-75

412
RECEIVED
JUL 15 1975
R. B. SNYDER

**DEPARTMENT OF
ENVIRONMENTAL QUALITY**

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5289

Robert W. Straub
GOVERNOR

July 11, 1975

RECEIVED

Portland General Electric Company
Power Resources
621 West Alder
Portland, Oregon 97205

JUL 16 1975

**D. R. MILLER
Asst. Vice President**

Attn: George J. Eicher
Manager, Department of Environmental Services

Re: Renewal for an Air Contaminant
Discharge Permit Application,
File No. 26-2499,
Harborton Plant

Gentlemen:

Your application for renewal of your Air Contaminant Discharge Permit has been assigned application number 0566 and has been accepted for filing by the Department on July 9, 1975. If the Department has not requested additional information within 15 days of the filing date, your application shall be considered complete for processing.

If no action has been taken on your application by the expiration date of your present permit, your present permit will remain in effect until final action is taken to grant or deny a new permit.

If you have any questions please contact Ed Woods of this office.

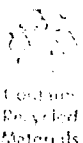
Sincerely,

LOREN KRAMER
Director

H. M. Patterson

H. M. Patterson
Assistant Director
Air Quality Program

EGW:df
cc: Portland Regional Office



APPLICATION FOR AIR CONTAMINANT DISCHARGE PERMIT

NOTE: Prepare 2 copies, each to include all SCHEDULES and REQUIRED INFORMATION
Retain 1 copy and forward 2 copies to this Department:

Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

Attention: Air Contaminant Discharge Permit Program Phone: (503) 229-5267

The applicant named below hereby submits this completed application and requests that the air contaminant source(s) described in Item 3 below be issued an Air Contaminant Discharge Permit.

<p>1. Official Applicant Identification:</p> <p>Firm Name <u>Portland General Electric Co.</u></p> <p>Division _____</p> <p>Mailing Address <u>621 S. W. Alder Street</u></p> <p>City <u>Portland</u> State <u>OR</u> Zip <u>97205</u></p> <p>Phone Area Code <u>503/</u> <u>228-7181</u></p>	<p>2. Source Site Description:</p> <p>Business Name <u>Harborton Station</u></p> <p>Plant Site Address <u>N. W. St. Helens Road</u></p> <p>City <u>Portland</u> State <u>OR</u> Zip _____</p> <p>Phone <u>503-228-7181</u></p>
---	--

3. Air Contaminant Source(s) and fees as listed in Table A of OAR, Chapter 340, Section 20-033.02 through 20-033.20, for your facility are shown below. Complete and attach the information as required by Schedules I, and II of this application for each air contaminant source.

	S.I.C. Number	AIPID Fee*	PCD Fee**
a. <u>Electric Power Generation</u>	<u>4911</u>	<u>\$</u>	<u>\$ 225.00</u>
b. _____	_____	<u>\$</u>	<u>\$</u>
c. _____	_____	<u>\$</u>	<u>\$</u>
Totals		<u>\$</u>	<u>\$ 225.00</u>

Submit a check with this application in the amount of \$ _____ payable to this Department for one filing fee (\$25.00) and the total of AIPID fee's. The first total PCD fee in the amount of \$ 225.00 must be paid prior to final issuance of a permit and may be included with this application.

Amount of Enclosed Check \$ 225.00

4. Certification: I hereby apply for permission to discharge air contaminants in the State of Oregon as stated or described in this application and certify that the information contained in this application, and the schedules and exhibits appended hereto are to the best of my knowledge and belief true and correct.

(Signature of owner or legally authorized representative)
Manager
Dept. of Environmental Services July 3, 1975
(Title) (Date)

* Application, Investigation and Permit Issuing or Denying Fee
** Permit Compliance Determination Fee

SECTION 1 -- IDENTIFICATION OF APPLICANT AND PERMIT (CONTINUED)

(4) Person Authorized to Receive Permit:

Name: George J. Eicher
 Manager
Title: Dept. of Environmental Services Phone: Area Code 503 / 228-7181, Ext. 533
Address: 621 Southwest Alder Street
City: Portland State: Oregon zip: 97205

(5) Person to Contact for Additional Details:

Name: R. Bruce Snyder
Title: Meteorologist Phone: Area Code 503 / 228-7181, Ext. 309
City: Portland State: Oregon zip: 97205

(6) Status of Applicant

☒ Lessee ☐ Government Agency
☐ Owner:
 ☐ Individual
 ☐ Partnership
 ☒ Corporation

(7) Name and Address of the Individual, Partner, or Corporation's Registered Agent:

Name: James Buell
Title: Assistant Secretary Phone: Area Code 503 / 228-7181, Ext. 371
Address: 621 Southwest Alder Street
City: Portland State: Oregon zip: 97205

SCHEDULE I - DESCRIPTION OF AIR CONTAMINANT SOURCE

The information required in this schedule must be furnished for each air contaminant source listed in Item 3, page 1 of the application.

Air Contaminant Source
(as listed in Item 3 of application)

S.I.C.

1. General Production Information

State the production rate in the units delineated in the applicable section of the OAR rules or in units generally used by the industry for each air contaminant source process or any component thereof for which a specific emission standard has been adopted.

- a. Maximum hourly production rate 254.4 MW @ 30°F
- b. Normal hourly production rate 220.8 MW @ 53°F
- c. Primary operating schedule (indicate by hours per day, days per week and weeks per year. If seasonal, indicate normal season.)

Operation requirements vary but operation is usually concentrated in the coldest months of the winter and the low water months of late summer.

- d. Products produced:

<u>Description</u>	<u>Annual Production (Tons, Bd. Ft., Sq. Ft., etc.)</u>

- e. List below the major raw material(s) including fuels utilized (use additional sheet if necessary)

<u>Raw Material and Fuels</u>	<u>Amount Utilized</u>
<u>Distillate Fuel Oil (0.3% sulfur max)</u>	<u>20,000 gph max.</u>

SCHEDULE I - DESCRIPTION OF AIR CONTAMINANT SOURCE (Continued)

2. Process Flow Diagram

- a. Attach a process flow diagram showing relationship of process equipment. Indicate where raw materials identified in 1e enter the process, where liquid waste, solid waste and air contaminants exit and where finished products are obtained. Identify each air contaminant discharge point and air pollution control device with a unique descriptive item name and code letter.

b. Description of Air Pollution Control Device(s)

<u>Code Letter</u>	<u>Nomenclature of Air Pollution Control Device</u>	<u>Equip. Mfg. Name</u>	<u>Specifications or Model No.</u>	<u>Design Eff. (%)</u>	<u>Date Installed</u>	<u>Amt. of air Contaminants Collected/yea</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

SCHEDULE I - DESCRIPTION OF AIR CONTAMINANT SOURCE (Continued)

c. Description of Air Contaminant Discharge Point(s)

Code Letter	Discharge Temp., °F	Discharge Velocity ft./min	Discharge Volume Flow SCFH	Height Above Ground, Ft	Stack Cross Sectional Area (sq ft)	Air Contaminants Emitted	Maximum Emission Rate lb/hr	Period of Discharge Hours/d Days/week
3a-3f	825	~ 22,000	600,000	47	58.5	CO, SO ₂ , NO _x Particulate	See source test report	

Describe how emission rates were determined. If by source test, submit a copy of the test report with this application.

See source test report

SCHEDULE I - DESCRIPTION OF AIR CONTAMINANT SOURCE (Continued)

3. Plot Plan for the Air Contaminant Source Listed in Item 3, page 1 of application.

Attach a site plot plan showing the physical location on the plant site of process equipment, air pollution control device(s) and air contaminant discharge point(s). Use the same code letters employed in this Schedule, Parts 2b and 2c. The plot plan must show the distance, location and height of the nearest inhabited residential and/or commercial property, site access and nearest public road. More than one plot plan may be used when different scales are necessary or when a single plot plan becomes unduly complex. All plot plans must include a North indicator.

SCHEDULE II - SUPPLEMENTAL PLANT SITE INFORMATION

(Only one Schedule II is required for entire plant site)

1. Refuse Disposal Methods:

Waste Material	Source (Relate to Process Flow Diagram)	Quantity	Disposal Method	Disposal Site
Fuel Oil	Fueling and Maintenance	Nil	Reclamation	

2. Other air contaminant source(s):

Are other air contaminant source(s) located at plant site for which a permit is not being applied for at this time?

No X Yes If yes, list below and briefly describe.

Air Contaminant SourceAir Contaminant Discharge Permit No. (if issued)

DESCRIPTION OF AIR CONTAMINANT SOURCE

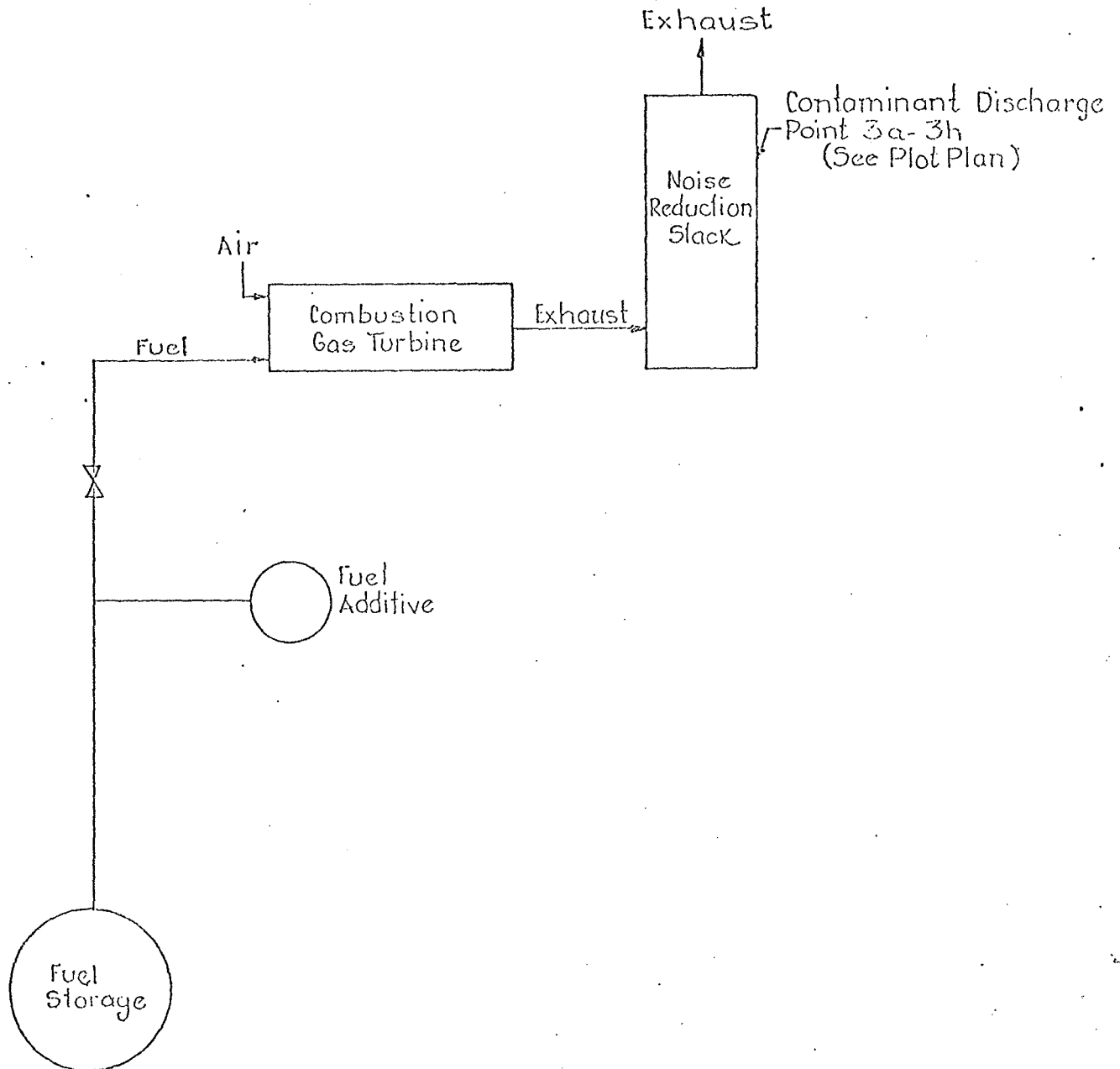
Process Flow Diagram

Below or on a separate page attach a process flow diagram showing the material flow through the plant. Indicate the location of control devices, emissions to the atmosphere, and quantities if known.

More than one process flow diagram showing different processes within the plant may be submitted if necessary. Please use the same company ID as on other forms.

FLOW DIAGRAM

See Page 4
Item 2a.



NOTE:

Represents 1 Engine & Slack.



**DEPARTMENT OF
ENVIRONMENTAL QUALITY**

RECEIVED

AUG 5 1975

**D. R. MILLER
Asst. Vice President**

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5390

**Robert W. Straub
GOVERNOR**

July 31, 1975

Mr. George Eicher
Portland General Electric Company
621 S. W. Alder
Portland, Oregon 97205

Re: AQ - PGE Harborton
File No. 26-2499

George
Dear Mr. Eicher:

This will acknowledge receipt of your application for renewal of your Air Contaminant Discharge Permit for the Harborton Gas Turbine Plant.

Since your current permit was issued after public hearing and authorization by the Environmental Quality Commission, it is my intention to schedule this matter before the Commission at its regularly scheduled meeting to be held October 24, 1975, in Portland.

Any pertinent information that you would like the staff to consider in preparing its report and recommendation for presentation to the Commission should be submitted no later than September 26, 1975.

Condition 2.8 of your present permit provides that the turbines not be operated at the Harborton site after September 1, 1975. This permit, although scheduled to expire September 1, 1975, would continue in effect until action is taken on the renewal application to issue or deny a permit.

Sincerely,

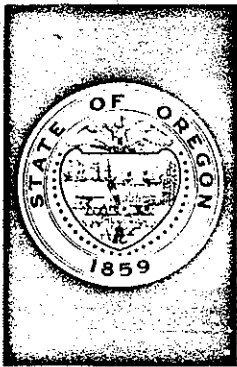
**LOREN KRAMER
Director**

EJW:lb

cc: Hon. Neil Goldschmidt, Mayor
City of Portland
cc: Portland Region, DEQ



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DEPARTMENT OF ENVIRONMENTAL QUALITY

OCT 14 1975

SYSTEM CONTRACT CONSTRUCTION BRANCH

FILE REFERENCE NO. 424.0

Handwritten signature/initials

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5395

ROBERT W. STRAUB
GOVERNOR

October 9, 1975

RECEIVED

OCT 13 1975

G. J. EICHER

Handwritten signature/initials

Mr. George Eicher
Portland General Electric Company
621 S.W. Alder Street
Portland, Oregon 97205

Re: AQ-Noise, PGE Harborton

Dear Mr. Eicher:

My letter of August 20, 1975 stated that the PGE Harborton permit renewal application would be scheduled before the EQC at its October 24, 1975 meeting.

Since previously requested information, specifically, the report "An Air Quality Tracer Study for the Harborton Generators" was submitted to the Department on September 26, 1975 and since it will take from two to three weeks of intensive modeling work to adequately interpret and evaluate the data in this report, it will not be possible for the Department to complete an adequate staff report to the Commission members in time for the October meeting deadline.

Accordingly, the Harborton permit renewal matter has been re-scheduled for the Commission's November 21, 1975 meeting in Portland.

In view of the further delay in processing your application for the above stated reason, your Harborton permit No. 26-2499 issued September 25, 1973, including addendum No. 1 to said permit issued November 6, 1974 and the modification effected by my letter of August 20, 1975, are hereby further modified pursuant to OAR 14-050 SPECIAL PERMITS, as follows:

Operation of the Harborton plant during the interim period October 24, 1975 through December 1, 1975 is hereby authorized only in case of emergency such as loss of transmission capability to the area or loss of major PGE production plants except that normal engine exercise may be conducted as necessary to prevent equipment damage.



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Mr. George Eicher
Page 2.
October 9, 1975

All other conditions of your existing permit and the addendum thereto shall remain in full force and effect until such time as the Department takes final action on your permit renewal application.

Your cooperation in this matter is greatly appreciated.

Sincerely,

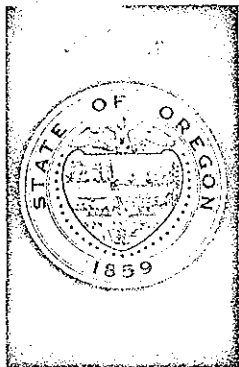
A handwritten signature in black ink, appearing to be "Loren Kramer", with a long horizontal line extending to the right.

LOREN KRAMER
Director

EJW:1b

cc: City of Portland

es to: Messrs. Porter, Phillips, Bredemeier, Stoloff, Welch,
Woodcock, Wildfong, Snyder



DEPARTMENT OF
ENVIRONMENTAL QUALITY

Received 11/25/75 a.m.
cc: J. L. Williams

NOV 25 1975

SYSTEM CONTRACT CONSTRUCTION BRANCH

FILE REFERENCE NO. 424, 0
RECEIVED

NOV 24 1975

G. J. EICHER

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5301

ROBERT W. STRAUB
GOVERNOR

November 21, 1975

NY

Mr. George Eicher
Portland General Electric
621 S. W. Alder Street
Portland, Oregon 97205

Re: Air Contaminant Discharge Permit No. 26-2499,
including Addendum No. 1 and August 20 and
October 9, 1975 letter modifications
(Harborton Plant)

Dear Mr. Eicher:

Pursuant to your recent request and in accordance with Section 10-040, chapter 340, Oregon Administrative Rules, the Department of Environmental Quality hereby modifies the above-described permit by amending Condition 3.4, set forth in Addendum No. 1 to said permit, to read as follows:

3.4 The permittee shall provide noise controls (mufflers) for the combustion turbines so as to limit sound pressure levels in accordance with Condition 1.4.

Also, in view of the further delay in processing your permit renewal application, operation of the Harborton plant until December 31, 1975, or until the Department takes final action on such application, whichever is the earlier, is hereby authorized only in case of emergency, such as loss of transmission capability to the area or loss of major PGE production plants, except that normal engine exercise may be conducted as necessary to prevent equipment damage.




Mr. George Eicher
November 21, 1975
Page Two

Because Portland General Electric has requested these modifications, the 20-day notice requirement for a hearing request on a proposed permit modification, provided for in said section 14-040, is deemed waived and these modifications are effective as of this date.

These modifications are made without in any way prejudicing the right of the Department to grant upon such conditions as it deems necessary, or to deny, an air contaminant discharge permit upon the application of Portland General Electric now pending before the Department for a renewal of the above-described permit.

Sincerely,

A handwritten signature in dark ink, appearing to be 'Loren Kramer', with a long horizontal stroke extending to the right.

LOREN KRAMER
Director

LK:cm

cc: Estes Snedecor
Raymond P. Underwood

Harb.
Gen. Rel
DEQ

AIR CONTAMINANT DISCHARGE PERMIT

HARBORTON SITE

Date _____

Permitted Activities

Until such time as this permit is modified or revoked, but not after March 31, 1981, PORTLAND GENERAL ELECTRIC COMPANY is herewith permitted in conformance with the requirements, limitations, and conditions of this permit to discharge exhaust gases containing air contaminants from its eight (8) Pratt and Whitney (PT4C-1 combustion turbines) fuel-burning devices located at the Harborton substation approximately one (1) mile north of Linnton, Oregon, including emissions from those processes and activities directly related or associated thereto.

Compliance with the specific requirements, limitations, and conditions contained herein shall not relieve the permittee from complying with all rules and standards of the DEQ and the laws administered by the DEQ.

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all contaminant control equipment such that the emission of air contaminants is kept at the lowest practicable levels.
2. Emissions of air contaminants shall not exceed an opacity (as defined by OAR, Chapter 340, Section 21-005(4)) equal to or greater than ten percent (10%) for a period or periods aggregating more than three (3) minutes in any one (1) hour from any single turbine plume or combination or turbines plumes.
3. When the turbines are fired with distillate fuel oil, emissions of air contaminants shall not exceed smoke spot number 2 as measured by the American Society for Testing Material Procedure D2156-65 for any single turbine.

Special Conditions

4. The permittee shall limit operation of the combustion turbines to emergency conditions in accordance with the following criteria:
 - a. The permittee shall operate the Harborton plant only if failure to operate the plant shall result in denial of service to customers entitled to firm service. Prior to any operation, PGE shall determine that:
 - (1) No other normally operated PGE generation resources, including Bethel and Beaver (simple or combined cycle), are available,
 - (2) Power cannot be obtained under any power exchange contracts,
 - (3) Diligent effort has been made to generate or purchase power from any other resources which may be reasonably brought on line. "Reasonably" shall not be construed to require use of units which are clearly excessive in cost to put into operation or to operate relative to the benefits expected, or which threaten the environment to a greater extent than operation of the Harborton plant.
 - b. If PGE is called upon to supply power to persons outside of its service territory by virtue of any agreement it may have with others, PGE shall diligently pursue with other contract signatories all alternative sources of power covered by the contract and shall exhaust all reasonable possibilities for purchasing power for resale before using combustion turbines at Harborton.
 - c. Nothing in paragraphs a or b above shall be construed to hamper PGE's discretion to operate Harborton in response to an unanticipated breakdown of facilities or other emergency requiring immediate generation to satisfy firm power requirements; provided that PGE shall, at the first reasonable opportunity, change its dispatch of generation capacity to comply with paragraphs a and b.

Nor shall paragraphs a and b be construed to interfere with required turbine maintenance, including periodic exercise under Special Condition 7 below.

- d. At the earliest reasonable opportunity, either prior to an anticipated emergency or within 24 hours after start-up of the Harborton units, if the emergency cannot be anticipated, PGE shall advise the DEQ and shall demonstrate the nature and extent of such emergency to the satisfaction of the DEQ. An affidavit signed by two PGE officers establishing the emergency operation including the availability and cost of power from all other sources available to PGE shall be submitted to the DEQ. PGE may be required to participate in discussion of any operation of Harborton with representatives of the Public Utility Commissioner, Department of Energy, Bonneville Power Administration, or any other interested agency or utility.
5. In no event shall permittee operate the combustion turbines in excess of _____ hours without the written approval of the Director of the Department.
6. Fuels other than natural gas shall not be used for startup, operation or shutdown without prior specific approval by the DEQ. In no case shall distillate fuel oil with a sulfur content greater than 0.3% be used.
7. Periodic turbine engine exercise shall be scheduled to ensure proper operation of the facility and prevent equipment damage, and shall be allowed in accordance with an exercise schedule approved by the DEQ in writing.
8. The permittee shall not operate the combustion turbine facilities at the Harborton site after March 31, 1981. PGE shall advise the DEQ no later than March 31, 1980 of its plans for moving the combustion turbines from the Harborton site.

Monitoring and Reporting

9. The permittee shall effectively monitor the operation and maintenance of each combustion turbine. Unless otherwise specified in writing, information shall be collected and submitted for each turbine in accordance with procedures filed by the permittee and approved by the DEQ and shall include, but not necessarily be limited to, the following parameters and testing frequencies:

Time of operation,
Quantities and types of fuel used related to time of operation,
Electrical output related to time of operation,
Fuel additives used related to time of operation,
Smoke spot, daily when operated on oil,
Nitrogen oxides (NO_x): continuous when operating.

10. The permittee shall document to the DEQ, by type, in a manner that will permit accurate computation of SO₂ emissions resulting from turbine operations, the sulfur content of all fuel oils utilized.
11. The permittee shall conduct other emission tests and report the results thereof as may be specified in writing by the DEQ.
12. Unless otherwise specified in writing by the DEQ, the permittee shall at all times maintain available for inspection at the site and shall submit all data required to be collected under Conditions 4.1, 4.2 and 4.3 not later than fifteen (15) days after the end of each calendar month of operation.
13. The permittee shall notify the DEQ by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset, or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

The nature and quantity of increased emissions that have occurred or are likely to occur,

The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,

The corrective action that is proposed to be taken, and

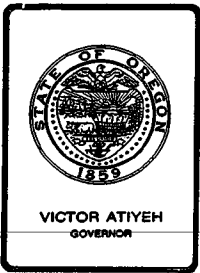
The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

General Conditions

14. The permittee is prohibited from conducting any open burning at the plant site.
15. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
16. The permittee shall at all times conduct dust suppression measures to meet the requirements set forth in "Fugitive Emissions" and "Nuisance Conditions" as defined in OAR, Chapter 340, Section 21-050.
17. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
18. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas at all reasonable times for the purposes of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emission discharge records and otherwise conducting all necessary functions related to this permit.
19. The permittee is prohibited from altering, modifying, or expanding the subject facilities so as to affect emissions to the atmosphere without prior notice to an approval by the DEQ.

20. The permittee shall be required to make application for a new permit prior to substantial modification, alteration, addition, or enlargement of the subject facilities which would have a significant impact on air contaminant emission increases or reductions at the plant site.
22. This permit is subject to revocation for cause, as provided by law, including:
 - a. Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
 - b. Violation of any of the requirements, limitations or conditions contained herein; or
 - c. Any material change in quantity or character of air contaminants emitted to the atmosphere.

RJ/rn/61m89.2B2



Cc: Glen Bredemeier, Bart Withers

Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-

December 27, 1979

RECEIVED
DEC 28 1979
ROBERT H. SHORT
PRESIDENT

Robert H. Short, President
Portland General Electric
121 SW Salmon Street
Portland, OR 97204

Re: AQ-PGE Harborton

Dear Mr. Short:

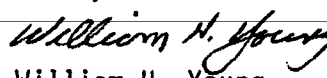
I have received a copy of President Carter's Executive Order pertaining to operation of PGE's Harborton turbines issued in response to Governor Atiyeh's petition pursuant to Section 110(f) of the Federal Clean Air Act.

This order, and the Governor's Executive Order Number EO-79-27 satisfies condition 7 of the Special Permit issued by this Department on December 11, 1979 such that the Harborton turbines may be operated beyond the 100 ton cumulative carbon monoxide limit, but not after February 7, 1980.

Special Permit Number 26-2499 continues in effect through February 7, 1980 unless modified, revoked or extended.

Your cooperation in complying with all permit conditions is appreciated.

Sincerely,


William H. Young
Director

WHY:nlb

Attachments:

President's Executive Order
Governor's Executive Order



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DEQ-1

PGE0047194

EXECUTIVE ORDER

RECEIVED
DEC 26 1979

Governor Atiyeh of the State of Oregon petitioned me on December 22, 1979, for a determination under Section 110(f) of the Clean Air Act that a regional energy emergency exists in Oregon of such severity that a temporary suspension of the federally promulgated new source construction and permitting prohibition under Section 110 and Part D of the Clean Air Act and appropriate provisions of Oregon's State Implementation Plan is necessary to help alleviate potentially high levels of unemployment caused by possible curtailments of electricity supply to the region. After considering the information and views provided to me by Governor Atiyeh, the Secretary of the Department of Energy, and the Administrator of EPA, I am hereby making the requested determination, subject to the conditions listed below:

- (1) This determination applies only to the Harborton facility discussed in the Governor's petition.
- (2) This determination expires on February 7, 1980. I will rescind this determination before that date if the potential energy shortage is substantially eased in the interim.
- (3) Oregon's Department of Environmental Quality will monitor the air quality impact of operating the Harborton facility and will require the termination of its operation if air quality levels approach the primary ambient air quality standards. In no case would this declaration permit excesses of the health related primary ambient air quality standards.
- (4) The Governor calls for a statewide electricity conservation effort. The State will submit to EPA and DOE biweekly reports on electricity consumption levels in the State, including the effects of its electricity conservation program. This determination is made in full recognition of Oregon's excellent record in the area of energy conservation.
- (5) The operation of the Harborton facility will not result in a reduction in the electric energy output of other fossil fuel fired generating facilities in the State of Oregon.
- (6) PGE will make maximum practicable effort to purchase available electric power from other regional utilities. State regulatory authorities will seek to remove regulatory impediments to power purchase by PGE and allow timely recovery of prudently incurred purchased power costs.

[Handwritten signature]



State of Oregon
OFFICE OF THE GOVERNOR

EXECUTIVE ORDER NO. EO-79-27

**TEMPORARY EMERGENCY SUSPENSION OF AIR QUALITY IMPLEMENTATION PLAN
TO PERMIT OPERATION OF PORTLAND GENERAL ELECTRIC COMPANY'S HARBORTON
TURBINES**

Pursuant to Section 110(f) of the Clean Air Act, President Carter has determined by Executive Order dated December 27, 1979, that a regional energy emergency exists and that the Governor of Oregon may issue a temporary emergency suspension of the Air Quality Implementation Plan to permit the operation of Portland General Electric Company Harborton turbines.

There exists in Portland General Electric's service area a temporary energy emergency involving potentially high levels of unemployment or loss of necessary energy supplies for residential dwellings; and such unemployment or loss can be partially alleviated by an emergency suspension of the Air Quality Implementation Plan to permit the operation of the Harborton turbines. The facts supporting these findings are more fully set forth in my letters to the President of the United States dated December 22 and December 26, 1979.

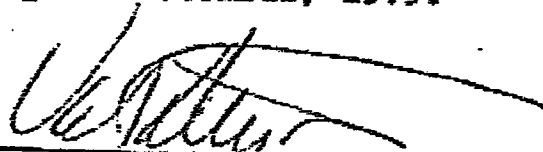
IT IS ORDERED AND DIRECTED THAT:

1. Portland General Electric Company is hereby authorized to operate its Harborton turbines subject to the provisions of the Special Air Contaminant Discharge Permit issued by the Department of Environmental Quality, File No. 26-2499, issued on December 11, 1979, until such time as, by Executive Order, I determine that the energy emergency no longer exists, but in no event later than the expiration of the President's Executive Order, or any extension thereof.
2. Portland General Electric has, after consultation with the Public Utility Commissioner of Oregon, instituted on its own initiative Stages 1 and 2 of the Voluntary Curtailment Plan set forth in the Public Utility Commissioner's Order No. 78-823. Portland General Electric shall continue implementing this curtailment plan.
3. The operation of the Harborton facility will not result in a reduction in the electrical energy output of other fossil fuel fired generating facilities owned or operated by Portland General Electric.

4. This Order takes effect immediately.

Done at Salem, Oregon, this 27th day of December, 1979.




GOVERNOR

ATTEST: 
Assistant SECRETARY OF STATE



ATTACHMENT 2

Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

December 11, 1979

Robert H. Short, President
Portland General Electric
121 Southwest Salmon Street
Portland, OR 97204

Re: Special Air Contaminant
Discharge Permit
File No. 26-2499

Dear Mr. Short:

In response to your November 21, 1979, letter and in consideration of Public Utility Commissioner John Lobdell's December 10, 1979, letter in which he made the finding that failure to operate the Harborton turbines would endanger the public health, safety and welfare, the attached Special Air Contaminant Discharge Permit is issued pursuant to OAR 340-14-050. This permit authorizes operation of PGE's Harborton turbines, subject to the conditions of said Special Permit, but not to exceed 60 days from the effective date of this letter.

This Special Permit is limited to 100 tons of carbon monoxide emissions or 60 days, whichever occurs first. It may be prudent to pursue the methods referred to in Condition 7 of Attachment A, by which a longer term permit or permits might be granted to meet any extended emergency which may occur pending relocation of the turbines in an area that will allow greater flexibility of operation.

Sincerely,

William H. Young
Director

WHY:w
AW0336
Attachment

Permit Number: 26-2499
Expiration Date: 2/9/80
Page 1 of 3 Pages

SPECIAL AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
522 Southwest Fifth, Portland, OR 97204
Mailing Address: Box 1760, Portland, OR 97207
Telephone: (503) 229-5696

Issued in accordance with the provisions of OAR 340-14-050

ISSUED TO:

Portland General Electric Co.
121 Southwest Salmon
Portland, OR 97204

REFERENCE INFORMATION:

11/21/79 letter from
Mr. Robert H. Short to
Mr. William H. Young

12/10/79 letter from
Mr. John J. Lobdell to
Mr. William H. Young

PLANT SITE:

Harborton Plant
One Mile north of Linnton
off St. Helens Road

Other Air Contaminant Sources at
this site:

None

ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY

William H. Young
WILLIAM H. YOUNG, Director

DEC 11 1979

Dated

Source(s) Permitted to Discharge Air Contaminants:

<u>Name of Air Contaminant Source</u>	<u>Standard Industry Code as Listed</u>
Electric Power Generation (Greater than 25 MW)	4911

Permitted Activities

Until such time as this permit expires or is modified or revoked, PORTLAND GENERAL ELECTRIC CO. is herewith permitted in conformance with the requirements, limitations and conditions of this permit to discharge treated exhaust gases containing air contaminants from its eight (8) Pratt and Whitney (FT4C-1 combustion turbines) fuel burning devices located at the Harborton substation approximately one (1) mile north of Linnton, Oregon, including emissions from those processes and activities directly related or associated thereto.

Compliance with the specific requirements, limitations and conditions contained herein shall not relieve the Permittee from complying with all rules and standards of the Department and the laws administered by the Department.

Performance Standards and Emission Limits

1. The Permittee shall at all times maintain and operate all air contaminant generating processes and all contaminant control equipment at full efficiency and effectiveness such that the emission of air contaminants are kept at the lowest practicable levels.
2. The turbines are allowed to be fired with natural gas only and emissions of air contaminants when gas firing shall not exceed any of the following:
 - a. An opacity (as defined by OAR, Chapter 340, Section 21-005(4)) equal to or greater than ten percent (10%) for a period or periods aggregating more than three (3) minutes in any one (1) hour from any single turbine plume or combination of turbine plumes.
 - b. 3.2 kilograms (7.0 pounds) per hour of particulate matter for any single turbine.
 - c. 85.9 kilograms (188 pounds) per hour of Nitrogen Oxide (NO_x) for any single turbine.
 - d. 0.6 kilograms (1.3 pounds) per hour of Sulfur Dioxide (SO_2) for any single turbine.
 - e. 75.4 kilograms (165 pounds) per hour of Carbon Monoxide (CO) for any single turbine.
3. Turbine operation shall be limited to emergency conditions as judged by the Public Utility Commissioner when failure to run Harborton could cause unemployment or loss of energy to residential dwellings. Harborton shall be the last PGE resource to be put on line in the case of an emergency except that the Harborton plant may be operated prior to PGE's Beaver plant until such time as gas is available at Beaver.
4. The Permittee shall notify the Department of the startup and shutdown of the turbines.
5. No combustion turbine shall be operated for more than one (1) hour in any 24 hour period, at a power output greater than 30 megawatts or less than 15 megawatts (30°F ambient basis) except for startup or shutdown operation.
6. Turbine operation shall be curtailed under an air pollution alert, warning or emergency for ozone, or when particulate levels approach 95% of the federal primary ambient air standard of 260 micrograms per cubic meter, 24 hour average.
7. Operation shall be limited to a time period authorized by the City of Portland and to a cumulative period which does not result in emissions in excess of 100 tons of carbon monoxide unless PGE receives an emergency authorization under Section 110(f) of the Clean Air Act, or a temporary source EPA PSD permit is issued.

8. The Permittee shall permanently terminate operation of the turbines at the Harborton location no later than March 31, 1981.

9. The Permittee shall effectively monitor the operation and maintenance of each combustion turbine. Unless otherwise specified in writing information shall be collected and submitted for each turbine in accordance with procedures filed by the permittee and approved by the Department and shall include, but not necessarily be limited to, the following parameters and testing frequencies:

Time of operation,
Quantities and types of fuel used related to time of operation,
Electrical output related to time of operation,
Nitrogen Oxides (NO_x); continuous when operating, and
Carbon Monoxide (CO); continuous when operating.

10. Unless otherwise specified in writing by the Department, the Permittee shall at all times maintain available for inspection at the site all data required to be collected under conditions 4, 5 and 9, and shall submit such data to the Department not later than twenty-five (25) days after the end of each calendar month of operation.

An Ordinance granting a temporary conditional use permit to Portland General Electric Company to operate the combustion turbine generators at the Harborton site in Portland, Oregon, until May 1, 1980, subject to prior operating approval by the State of Oregon, and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds:

- (1) That Ordinance Nos. 137347, 139384 and 143714, passed by the Council, previously granted Portland General Electric Company a conditional use permit to operate the combustion turbine generators at the Harborton site in Portland. That presently, a severe water shortage condition exists in the Pacific Northwest which is causing a serious regional power shortage which is anticipated to exist through the winter season of 1979-80.
- (2) Additionally, Portland General Electric Company's Trojan generating facility is not operating and is not expected to be operational until mid-December of 1979, and also its start-up is subject to the approval of the Nuclear Regulatory Commission.
- (3) Further, there is insufficient purchase power available to Portland General Electric Company from other generating companies and agencies within the Pacific Northwest Regional Power Pool.
- (4) Presently, there is natural gas available to operate Harborton's generators which will result in a regional oil savings.
- (5) As a result of these conditions, Portland General Electric Company is facing a power shortage which, unless abated, could result in forced outages within its service area and, it is therefore in the public interest that the conditional use permit to operate the Harborton combustion turbine generating facility be extended until May 1, 1980; such operation, however, being subject to prior approval by the State of Oregon.
- (6) That Portland General Electric Company has previously been issued three conditional use permits to operate the Harborton generators under emergency conditions. The present circumstances are substantially similar to those existing at the time of the issuance of the three prior permits and, in light of the present possibility of a severe power shortage, it is reasonable that the Council exercise all powers necessary to protect the public's health, safety and welfare and waive all procedural conditions requisite to the issuance of a conditional use permit in Chapter 33 of the city code.
- (7) The Council findings contained in Ordinance Nos. 137347, 139384 and 143714 are generally reaffirmed.

NOW, THEREFORE, the Council directs:

- (a) That a conditional use permit be granted to Portland General Electric Company to operate solely on natural gas until May 1, 1980, its combustion turbine generating facility located on Tax Lots 10, 16, and 18, Section

NATIONAL FOR HARB
AS PAGE RESOURCE

HARBORTON LEASE

HARB. OPERATING
COSTS

PREVIOUS OFFERS
TO IP&L & PSP&L

34, T2N, R1W, W.M., Multnomah County, Oregon, in an M-1 Zone on the terms and conditions hereinafter provided. No fuel other than natural gas shall be used.

- (b) The generating facilities may not be operated until the Oregon Public Utility Commissioner publicly declares that there exists power supply conditions which will detrimentally effect the health, safety and welfare of the company's customers. In addition, the prior approval of all other appropriate state agencies and that of the Public Utility Commissioner is necessary for the operation of Harborton.
- (c) Portland General Electric Company agrees to hold the City of Portland harmless from any and all damages, or costs or cost of defense for any lawsuits brought against the city, of the Council of the City of Portland, or any officer, agent or employee, by reason of Portland General Electric Company's operation of the Harborton facility.
- (d) Notwithstanding subsection (a) of this ordinance providing for termination of this permit on May 1, 1980, continued use of the Harborton facility prior to that date is conditioned upon the continuance of the declaration of a power supply shortage by the Public Utility Commissioner of the State of Oregon, and the approval of all other appropriate state agencies.
- (e) Portland General Electric Company hereby acknowledges that this permit shall expire on May 1, 1980 and agrees that no subsequent application shall be made to the City of Portland to permit the operation of the Harborton facility, and further, to proceed to remove the combustion turbine generator from this location by May 1, 1981.
- (f) Portland General Electric agrees that this use is granted upon the condition and only upon the condition that the cost of the move, and of the cancellation of the lease will not be added to the rate base.
- (g) All procedural conditions prerequisite to the issuance of this conditional use permit required in Chapter 33 of the city code, are hereby waived.

Section 2. This conditional use permit shall not be effective until this ordinance is accepted in writing, including the terms and conditions hereof, by the Portland General Electric Company, in form approved by the City Attorney.

ORDINANCE No.

Section 3. The Council declares:

An emergency exists because delay in the effect of this permit will result in unnecessary hardship of uncertainty for the utility and its customers; therefore, this ordinance shall be in full force and effect from and after its passage by the Council.

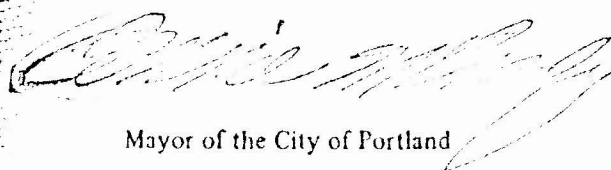
Passed by the Council, NOV 28 1979

Commissioner Ivancie

November 27, 1979

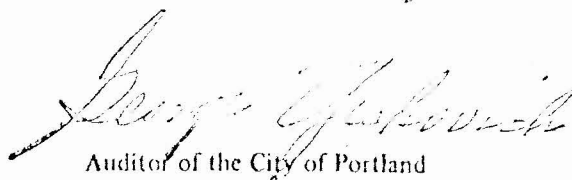
RC:relan/fg

EC:cn 11-28-79



Mayor of the City of Portland

Attest:



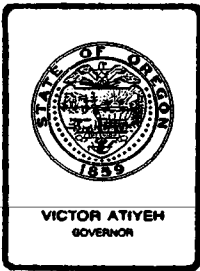
Auditor of the City of Portland

NATIONAL FOR HARB
AS PGE RESOURCE

HARBORTON LEASE

COSTS

TO IP&L & PSP&L



Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207

January 18, 1983

RECEIVED

JAN 21 1983

RUTHANN MOGEL

P. Y. Cree, General Manager
Environmental and Analytical Services
Portland General Electric
121 S. W. Salmon Street
Portland, Oregon 97204

Dear Ms. Cree:

In response to your January 18, 1983 letter, this special letter permit is issued pursuant to OAR 340-14-050 and authorizes operational testing of PGE's Harborton turbines, subject to the following conditions:

1. Operational tests shall be on natural gas only.
2. Operational tests shall be limited to no more than two twin pacs at any time.
3. Operational tests shall be limited to 7:00 a.m. to 7:00 p.m.
Operation of two twin pacs will be restricted to 8:00 a.m. to 5:00 p.m.
4. Combined twin pac operation shall be limited to 40 hours.
5. Prior verbal confirmation that air quality is acceptable shall be obtained from the Department before operational tests are started on any day. (Please contact Doug Brannock at 229-5836.)
6. Operational tests shall be kept to the minimum number required to ensure operational capability of the units.
7. Complete records of operational tests shall be maintained and made available to the Department on request.
8. City of Portland approval shall be obtained prior to operation.

This special letter permit is immediately effective and shall continue in effect through February 28, 1983, unless revoked or modified by the Department.

Sincerely,

William H. Young

W. H. Young
Director

JFK:h

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-57
W-90

7-31-72

File 424.0 - 478120

APPL. NO. 2074 DATE REC'D 7-11-72 A. Q. C. NOTIFIED

FAMILY UNITS _____ ROOMS _____ STORIES _____

APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET Temp No 12500 N.W. Marina Way
BETWEEN (NAME CROSS STREETS) N.E. 1/4 of NW. St. Helens Rd
LOT T.L. 181 BLOCK _____

ADDITION Tax Lot 18, Sec. 34, T2N, R1W, WM

SIZE OF LOT 44' x 110' SIZE OF BLDG. _____ OCCUPIED AS SW. Station

OWNER PGF CO ADDRESS 621 SW Alder St

BUILDER PGF CO ADDRESS 621 SW Alder St

PLANS BY Ebasco Services ADDRESS 621 SW Alder St

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB \$25,000
Grade site as shown on attached plan. All material on site

Reference CU-76-71

MUST COMPLY WITH ORDINANCES 1134486
REGARDING FLOOD FLOOD CONTROL

*No ^{gravel} ~~summary~~ on this permit.
NO PLBG THIS PERMIT
To be in accord w/ CU 76-71

PERMIT NO. _____
VALUATION 25,000
PERMIT FEE 405
HOUSE NO. FEE _____
DRIVEWAY FEE _____
TOTAL FEE _____
RECEIPT NO. 102068B

PLAN CHECK FEE
AMOUNT 122.00
RECEIPT NO. 61159B
COMPUTED BY Jenning
DATE JUL - 11 1972

FIRE DISTRICT 3 1/4 SECTION 1717
LAND USE ZONE M1 CHKD BY EW

OCCUPANCY GROUPS
BUILDING CODE F11 CONST. TYPE _____
P & Z CODE CU 76-71

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM	APPD BY	DATE
1 DRVWY.	NR	7-13-72
2 TRAFFIC	S	7-13-72
3 A. Q. C.	R	7-13-72
4 FIRE MARSHAL	SW	7-13-72
5 INDUS. WASTE	SW	7-13-72
6 STRUCT. ENGINEER	R	7-13-72
7 PLBG.	SW	7-5-72
8 ZONING	SW	7-20-72
9 HOUSE NUMBER	DLJ	7/5/72
10* SEWER	DLJ	7/5/72
11 PLAN EXAM.	SW	7-13-72
12 PERMIT ISSUED	SW	7-13-72

RESIDENTIAL

SEPARATE PERMITS REQUIRED FOR:			
PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

CITY _____ STATE _____
APPLICANT NR for PGF CO LICENSED CONTRACTOR YES ☐ NO ☐
SIGN IN OWN HANDWRITING

NOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH YOU MUST CALL.

APPLICATION FOR PERMIT TO ALTER EXISTING STRUCTURE

5-67
W-23

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

APPL. NO. 2476 DATE REC'D _____ A. Q. C. NOTIFIED _____
 MOVE ☐ WRECK ☐ REPAIR ☐ ADDITION ☐ CHANGE OCCU. ☐ ALTER ☐
 FAMILY UNITS 02 ROOMS _____ STORIES _____

APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET 12520 NW Marina Way
 BETWEEN (NAME CROSS STREETS) _____
 LOT TL 18 BLOCK _____
 ADDITION Sec. 34 T2N R1W Substation
 SIZE OF LOT 14 Acres SIZE OF BLDG. _____ OCCUPIED AS _____
 OWNER Portland Gen. Elec. Co. ADDRESS 621 SW Alder St
 BUILDER Turbo Power & Marine ADDRESS Farmington Conn.
 PLANS BY Turbo Power & Marine ADDRESS Farmington Conn.
 PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE
 ESTIMATED VALUATION OF COMPLETE JOB \$100,000

⑦ NO-SANITARY-PLBG. ALLOWED-ON-THIS-PERMIT.

See Attached Drawings

This permit for turbine foundations
 and embedded items only
 (See 472136)

FOUNDATION PLANS

NO CITY SEWERS

AVAILABLE

⑪ FENCE NOT INCLUDED IN THIS
 PERMIT.

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS
 AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY
 WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND,
 OREGON, CITY ☐ STATE ☐

APPLICANT [Signature] LICENSED CONTRACTOR YES ☐ NO ☒
 SIGN IN OWN HANDWRITING

NOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL
 INSPECTION, FOR WHICH YOU MUST CALL.

PERMIT NO. 473342
 VALUATION 100,000⁰⁰
 PERMIT FEE 603⁰⁰
 HOUSE NO. FEE _____

DRIVEWAY FEE _____

TOTAL FEE 63800 BRECEIPT NO. 63800 B

PLAN CHECK FEE 274⁵⁰
 AMOUNT 63800
 RECEIPT NO. 62623 B

COMPUTED BY P.E.J.DATE 9/15/72 AUG - 9 1972

FIRE DISTRICT 3 1/4 SECTION 1717
 LAND USE M1 CHKD BY Eva

OCCUPANCY GROUPS

BUILDING CODE E2 CONSTR. TYPE _____P & Z CODE CU 76-T R

INITIALS BELOW IDENTIFY
 PERSON RESPONSIBLE FOR
 APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1. DRVVY.	<u>HR</u>	<u>8-7-72</u>
2. TRAFFIC	<u>HR</u>	<u>8/28/72</u>
3. A. Q. C.	<u>HR</u>	<u>8/28/72</u>
4. FIRE MARSHAL	<u>HR</u>	<u>9-5-72</u>
5. INDUS. WASTE	<u>HR</u>	<u>8/7/72</u>
6. STRUCT. ENGINEER	<u>RRR</u>	<u>9-13-72</u>
7. PLBG.	<u>C.F.E.</u>	<u>8-10-72</u>
8. ZONING	<u>Eva</u>	<u>8-21-72</u>
9. HOUSE NUMBER	<u>HR</u>	<u>8-7-72</u>
10. SEWER	<u>E.J.</u>	<u>8-7-72</u>
11. PLAN EXAM.	<u>HR</u>	<u>8/28/72</u>
12. PERMIT ISSUED	<u>HR</u>	<u>SEP 13 1972</u>

RESIDENTIAL

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

COPIES TO: Messrs. Warren, Williams, Snedecor,

Phillips, Miller, GRIT - 3/1, Bredemeier, Welch, Snyder

MAR 1 - 1973

MAR 1 1973

SYSTEM CONTRACT CONSTRUCTION BRANCH

FILE REFERENCE NO. 424,0

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

1010 N.E. COUCH STREET PORTLAND, OREGON 97232 PHONE (503) 233-7176

27 February 1973

Portland General Electric
621 S.W. Alder Street
Portland, Oregon 97205

Attention: A. J. Porter, Senior Vice President

Gentlemen:

In accordance with Title 21 of the Columbia-Willamette Air Pollution Authority Rules enclosed is approval of Notice of Construction N/C #376 pertaining to two 100,000 bbl. fuel storage tanks at the Harborton site. The fuels listed for use as gas turbine fuel (#2 fuel oil through JP-4) are approved for storage in these tanks. If fuels with a Reid vapor pressure greater than 4 psia are to be stored in these tanks, additional review and approval will be necessary by CWAPA.

The approval of these storage tanks should in no way be construed to mean that an air contaminant discharge permit will be issued for the proposed gas turbine installation at the Harborton site. Consequently, PGE should recognize the risk involved in constructing the storage tanks without having obtained an air contaminant discharge permit authorizing construction and operation of the gas turbine installation.

We note in your letter accompanying the permit application that you mention the gas turbines are now under construction. On 27 October 1972 we notified PGE and sent copies of our new permit regulation. We alerted you to the fact that the permit application must be submitted preferably before the required 60 days prior to construction. Further, Section 22-035(2) of our permit regulation states that "no person shall construct, install, develop or operate any new air contaminant source listed in Rule 22-045(1) without first obtaining a permit from the Authority".

We are therefore advising you that construction of the gas turbines is not allowed until an air contaminant discharge permit has been issued by this authority. We would interpret construction to mean setting the gas turbines on the foundation at the Harborton site.

BOARD OF DIRECTORS

Francis J. Ivancie, Chairman
City of Portland

Fred Stefani, Vice-Chairman
Clackamas County

Burton C. Wilson, Jr.
Washington County

Ben Padrow
Multnomah County

A.J. Ahlborn
Columbia County

Richard E. Hatchard
Program Director

Portland General Electric
Page 2
27 February 1973

Air quality aspects of the proposed gas turbine installation are presently being reviewed in conjunction with your permit application which we received on 23 February 1973. Action to grant or deny the air contaminant discharge permit for the turbines will be based on an evaluation of the facility in respect to compliance with CWAPA Rules.

Very truly yours,



R. E. Hatchard
Program Director

REH:dgs
Enclosure

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 N.E. Couch Street, Portland, Oregon 97232
Telephone: 233-7176

Reference: Your Notice of Construction and
Application for Approval, dated
17 January 1973 N/C # 376

Portland General Electric Co.
621 S.W. Alder Street
Portland, Oregon 97205

Item and Location P.G.E. Harborton fuel
storage tanks (2) 100,000 bbls each.

(1) The above application is:

☒ Approved.* Construction may proceed.

☐ Conditionally approved.* See NC-6

→ **UPON COMPLETION OF CONSTRUCTION, PLEASE FILL OUT AND FORWARD THE ENCLOSED
NOTICE OF COMPLETION FORM (NC-4).**

☐ Not approved. An order for the prevention of construction, installation
or establishment of the proposed facility is being issued.

(2) No further action can be taken on the application because:

☐ Form (enclosed) is incomplete. Please complete and return.

☐ Further information is required to complete review. Please submit:

Signed

John F. Kowalczyk
John F. Kowalczyk

Title

Technical Director

Date

29 January 1973

***NOTE: GRANTING APPROVAL OR CONDITIONAL APPROVAL DOES NOT RELIEVE THE OWNER OF
THE OBLIGATION TO COMPLY WITH THE RULES ADOPTED BY THIS AUTHORITY.**

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232
Telephone: 233-7176

NOTICE OF COMPLETION

→ This form is to be completed and forwarded to this office upon completion of the construction, installation or establishment of:

P.G.E. Harborton fuel storage tanks (2). 100,000 bbls each

N/C 376

Date _____

Columbia-Willamette Air Pollution Authority
1010 NE Couch Street
Portland, Oregon 97232

Attention: Engineering Services

Gentlemen:

The construction, installation or establishment of the source facility or control facility described above was completed on _____

and will be in operation by _____.

Signature

Title

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

5-67
W-90

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

APPL. NO. _____ DATE REC'D _____ A. Q. C. NOTIFIED _____

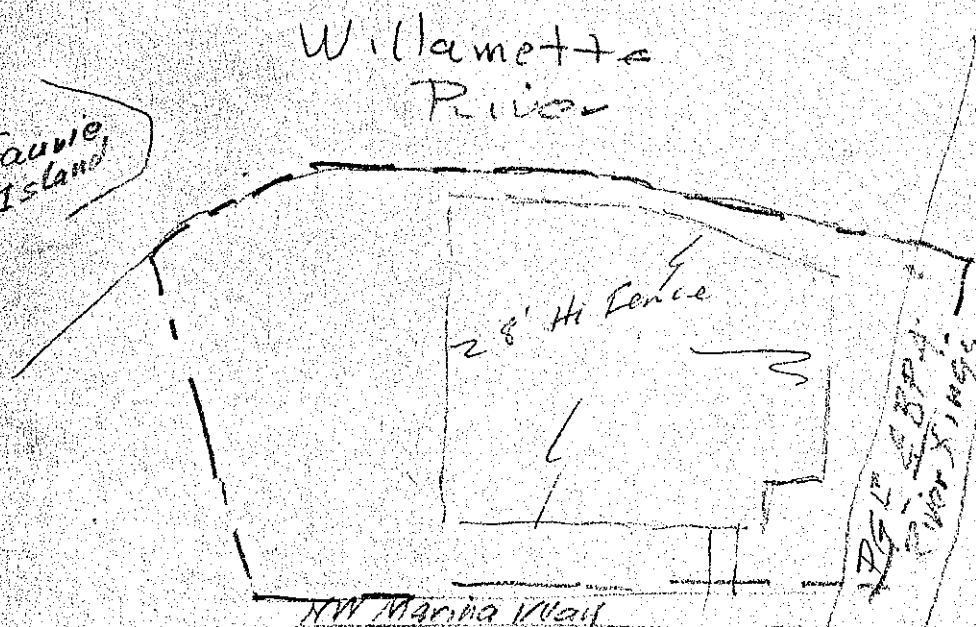
FAMILY UNITS _____ ROOMS _____ STORIES _____

APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET 12500 NW Marina Way
 BETWEEN (NAME CROSS STREETS) NE 1/4 of NW St Helens Rd.
 LOT T.1L 18 SEC 34 2N 1W BLOCK _____
 ADDITION _____
 SIZE OF LOT 44 ± A SIZE OF BLDG. _____ OCCUPIED AS Storage Station
 OWNER PGF CO ADDRESS 621 SW Alder St
 BUILDER San Jose Steel ADDRESS 723 N Tillamook
 PLANS BY PGF CO ADDRESS 621 SW Alder St

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB Installation of an 8ft high chain link fence
10,000 - 2500 ft



APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

APPLICANT [Signature] CITY ☐ STATE ☐

LICENSED CONTRACTOR
YES ☐ NO ☒

SIGN IN OWN HANDWRITING

PERMIT NO. 475876
 VALUATION 10,000.00
 PERMIT FEE 63.00
 HOUSE NO. FEE _____
 DRIVEWAY FEE _____
 TOTAL FEE _____
 RECEIPT NO. 61184-a

PLAN CHECK FEE

AMOUNT _____
 RECEIPT NO. _____
 COMPUTED BY _____
 DATE _____

FIRE DISTRICT 3 1/4 SECTION 1717
 LAND USE ZONE M-1 CHKD BY [Signature]

OCCUPANCY GROUPS

BUILDING CODE BT-2-C CONSTR. TYPE IV
 F & Z CODE _____

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1 DRVY.	<u>DR. [Signature]</u>	<u>2-13-73</u>
2 TRAFFIC	<u>[Signature]</u>	<u>2/16/73</u>
3 A. Q. C.		
4 FIRE MARSHAL	<u>[Signature]</u>	<u>2-16-73</u>
5 INDUS. WASTE	<u>[Signature]</u>	<u>2-13-73</u>
6 STRUCT. ENGINEER		
7 PLBG.		
8 ZONING	<u>[Signature]</u>	<u>2-13-73</u>
9 HOUSE NUMBER	<u>[Signature]</u>	<u>2-13-73</u>
10 SEWER	<u>[Signature]</u>	<u>2-13-73</u>
11 PLAN EXAM.	<u>[Signature]</u>	<u>2-13-73</u>
12 PERMIT ISSUED	<u>[Signature]</u>	<u>FEB 16 1973</u>

RESIDENTIAL

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

NOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH

PORTLAND GENERAL ELECTRIC COMPANY



Electric Building
621 S.W. Alder Street
Portland, Oregon 97205

February 16, 1973

2/20/73 sent w/check
c: J. L. Williams
Warren Hastings

Honorable Francis J. Ivancie
Commissioner of Public Safety
City Hall
Portland, Oregon 97204

Dear Commissioner Ivancie:

Pursuant to Section 31.56.040 of the Fire Regulations of the City of Portland, Portland General Electric Company hereby applies for a permit to construct two above ground 100,000-bbl. tanks for storage of flammable liquids at 12500 N.W. Marina Way, Portland, Oregon. The tanks to be installed will be of fixed cone roof design with floating pan inside, will be designed by General American Transportation Company, and will be built in accordance with API Spec. 650. The tanks will be installed within an impervious clay lined dike designed to contain possible spills as required by NFPA 30, Item 2173.

The proposed use of such tanks is the storage of fuels ranging from #2 distillate to Jet A.

We respectfully request the introduction of an ordinance in order that this matter be considered by the City Council and a Permit thereafter be granted. The Permit fee in the amount of one hundred dollars is enclosed.

Yours very truly,

J. L. Williams
J. L. Williams
Vice President

Encl.
(ck. # 90831 dtd. 2/20/73)

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-67
W-90

APPL. NO. 1138 DATE REC'D _____ A. Q. C. NOTIFIED _____

FAMILY UNITS _____ ROOMS _____ STORIES _____
APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET 12500 NW Marina Way
BETWEEN (NAME CROSS STREETS) N 1/4 of NW St Helens Trcl
LOT T.L. 18 Sec 34 2nd 1W BLOCK _____
ADDITION _____ SEC 34 2nd 1W
SIZE OF LOT 1/4 A SIZE OF BLDG. 26x50 OCCUPIED AS Control House
OWNER PGF CO ADDRESS 6215W Alder St
BUILDER Ray E. Becker Co ADDRESS 2345 N Ross Ave
PLANS BY Ray E. Becker Co ADDRESS 2345 N Ross Ave

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB 2200

(11) Approved without toilet facilities for intermittent occupancy only (No workmen stationed within this building)

7 APPROVAL AS CONDITIONS ON NOTE (11) WITH NO PLUMBING PIPING RDS TO DRYWELL WITH PERMITS.

(11) Subject to approval of Fire Marshal Insp.

NO CITY SEWERS AVAILABLE

Council Ord. reqd. for building toilet.

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

CITY ☐ STATE ☐

LICENSED CONTRACTOR
YES ☐ NO ☒

APPLICANT Ray E. Becker Co

SIGN IN OWN HANDWRITING

NOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION FOR WHICH

PERMIT NO. 177510
VALUATION 2200
PERMIT FEE 22

HOUSE NO. FEE _____
DRIVEWAY FEE _____

TOTAL FEE _____
RECEIPT NO. 65402-a

PLAN CHECK FEE _____
AMOUNT 11

RECEIPT NO. 65074A

COMPUTED BY VF
DATE 4-24-73

FIRE DISTRICT 3 1/4 SECTION 1717
LAND USE ZONE M-1 CHRG BY Buz

OCCUPANCY GROUPS
BUILDING CODE F2 CONSTR. TYPE V
P & Z CODE _____

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1 N.R. DRVWY.	<u>CD</u>	<u>4/23/73</u>
2 TRAFFIC	<u>S</u>	<u>S</u>
3 A. Q. C.	<u>S</u>	<u>S</u>
4 FIRE MARSHAL	<u>P.D. 124</u>	<u>5-4-73</u>
5 INDUS. WASTE	<u>2H</u>	<u>4/23/73</u>
6 STRUCT. ENGINEER	<u>R.E.</u>	<u>4/23/73</u>
7 PLBG.	<u>ECW</u>	<u>5-4-73</u>
8 ZONING	<u>W.E.P.</u>	<u>5-2-73</u>
9 HOUSE NUMBER	<u>1H</u>	<u>4/23/73</u>
10 SEWER	<u>E.H.</u>	<u>4/23/73</u>
11 PLAN EXAM.	<u>P.D.</u>	<u>5-4-73</u>
12 PERMIT ISSUED	<u>mt</u>	<u>4-23-73</u>

RESIDENTIAL

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	<input checked="" type="checkbox"/>	SPRINKLER SYSTEM	<input checked="" type="checkbox"/>
FURNACE INSTALLATION	<input checked="" type="checkbox"/>	SIGN	<input checked="" type="checkbox"/>
ELECTRICAL	<input checked="" type="checkbox"/>	CURB CUT AND DRIVEWAY	<input checked="" type="checkbox"/>
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-67
W-90

APPL. NO. 1174 DATE REC'D _____ A. Q. C. NOTIFIED _____

FAMILY UNITS _____ ROOMS _____ STORIES _____
APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET 12500 NW Marina Way
BETWEEN (NAME CROSS STREETS) NE 14 of NW 5th Helens Rd
LOT TL 18 BLOCK _____
ADDITION SEC 34 2N 1W
SIZE OF LOT 14 ± A SIZE OF BLDG. 30 X 40 OCCUPIED AS Maintenance Bldg
OWNER PGE CO ADDRESS 621 SW Alder St
BUILDER R. F. Becker Co ADDRESS 2395 N Ross Ave
PLANS BY R. F. Becker Co ADDRESS 2395 N Ross Ave

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB 11,000.00

(11) APPROVED UNTIL TOILET FACILITIES ARE PROVIDED ON SITE.

See Drawings Attached
RAIN DRAINAGE TO APPROVED DISPOSAL BY PLB6 PER. AND AS PER NOTE (11)

NO CITY SEWER AVAILABLE

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

APPLICANT [Signature] CITY ☐ STATE ☐
LICENSED CONTRACTOR YES ☐ NO ☒
SIGN IN OWN HANDWRITING

NOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH

477627

PERMIT NO. _____
VALUATION 11,000.00
PERMIT FEE 20.50

HOUSE NO. FEE _____
DRIVEWAY FEE _____

TOTAL FEE _____
RECEIPT NO. 65554A

PLAN CHECK FEE _____
AMOUNT 10.20
RECEIPT NO. 65199A
COMPUTED BY [Signature]
DATE _____

FIRE DISTRICT 3 1/4 SECTION 1717
LAND USE ZONE M-1 CHKD BY BR

OCCUPANCY GROUPS
BUILDING CODE F2 CONSTR. TYPE IV
P & Z CODE _____

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1 DRVWY.		
2 TRAFFIC		
3 A. Q. C.		
4 FIRE MARSHAL		
5 INDUS. WASTE		
6 STRUCT. ENGINEER		
7 NOTE & PLBG.		
8 ZONING		
9 HOUSE NUMBER		
10 SEWER		
11 PLAN EXAM.		
12 PERMIT ISSUED		
13 MFEC		

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	



OFFICE OF
CITY AUDITOR
GEORGE YERKOVICH
CITY AUDITOR

May 11, 1973

J. L. Williams, Vice President
Portland General Electric Company
621 S.W. Alder
Portland, Oregon 97205

Dear Mr. Williams:

Enclosed is a copy of Ordinance No. 136486, passed by the Council May 10, 1973, granting a revocable permit to Portland General Electric Company to construct two flammable liquid storage tanks at their Harborton Gas Turbine Generating Plant on property located at 12500 N.W. Marina Way, under certain conditions.

Upon return of the enclosed Acceptance, signed as indicated, together with check or money order in the amount of \$10.00 in favor of John D. Weldon, Director of Records and Elections, we are prepared to file a certified copy of the ordinance, and Acceptance thereof, in the deed records of Multnomah County.

Yours very truly,

George Yerkovich
Auditor of the City of Portland

EC:lg
Encls.

SYSTEM CONTRACT CONSTRUCTION BR
FILE REFERENCE NO. 440-72-4
DRL
Kraley for file

GRIT FILE

No. 120.30.4

ACCEPTANCE

Portland, Oregon,.....May 11.....1973

GEORGE YERKOVICH
Auditor of the City of Portland.
Room 202, City Hall
Portland, Oregon 97204

Dear Sir:

This is to advise the City of Portland, Oregon, that I hereby accept the terms and provisions of Ordinance No. 136486, passed by the Council May 10, 1973, granting a revocable permit to Portland General Electric Company to construct two flammable liquid storage tanks at their Harborton Gas Turbine Generating Plant on property located at 12500 N.W. Marina Way, under certain conditions and declaring an emergency, and in consideration of the benefits to be received thereunder by me I hereby agree to abide by and perform each and all of the terms and provisions thereof applicable to me.

Very truly yours,

PORTLAND GENERAL ELECTRIC COMPANY

[CORPORATE
SEAL]

*

A. J. Porter

~~xxxxx Williams, Vice President~~
A. J. PORTER, Senior Vice President
621 S.W. Alder, Portland, Oregon 97205

Address

Approved as to form:

City Attorney

*When an acceptance is required from a firm or corporation the Acceptance must be signed by an officer of the firm or corporation stating his or her official title, and corporations must affix the corporate seal.

136486
ORDINANCE NO.

An Ordinance granting a revocable permit to Portland General Electric Company to construct two flammable liquid storage tanks at their Harborton Gas Turbine Generating Plant on property located at 12500 N.W. Marina Way, under certain conditions and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds that Portland General Electric Company, by J. L. Williams, Vice President, 621 S. W. Alder Street, Portland, Oregon 97205, has heretofore requested a permit to construct two flammable liquid storage tanks on property of their Harborton Gas Turbine Generating Plant located at 12500 N.W. Marina Way, Portland; that the tanks will be located in a new diked impounding basin, in accordance with company drawings C-11066 and C-11021 and will be vertical steel tanks constructed with cone roof and internal floating plan with the capacity to store 100,000 barrels (4,200,000 gallons) each, used for the storage of distillate fuels ranging from JET A, A-1 to No. 2 - Class II flammable liquids; that the fuels will be used to operate turbine engines to generate electricity; that it has been recommended by the Fire Marshal and the Director of the Bureau of Buildings, and approved by the Commissioner in charge of said Bureau, that said permit be granted under certain conditions; now, therefore, a revocable permit hereby is granted to Portland General Electric Company to construct two flammable liquid storage tanks at their Harborton Gas Turbine Generating Plant on property located at 12500 N.W. Marina Way, under the following conditions and as set forth in a letter dated March 29, 1973 addressed to Commissioner Francis J. Ivancie from the Fire Marshal:

(1) That the company drawings C-11066 dated 9/12/72, C-11021 dated 12/20/72, C-11067 dated 9/12/72, C-11065 dated 8/21/72, B-209801 dated 8/21/72, 1-3270 dated 12/13/72; Specification No. FGE-2489-ASI dated 9/15/72; impounding basin calculations dated 3/5/73; and the company letter of application, dated 2/16/73, shall be made a part of this permit.

(2) That no flammable or combustible liquid with boil-over characteristics or any unstable or reactive liquid which will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure or temperature shall be stored in the tanks constructed under this permit.

(3) That each tank shall be built in accordance with American Petroleum Institute's Standard No. 650, entitled "Welded Steel Tanks for Oil Storage", 4th Edition, June 1970, and shall bear the A.P.I. monogram.

(4) That the fixed roofs, floating roofs and appurtenances, and the normal and emergency venting of each tank shall be in accordance with requirements of A.P.I. Standard No. 650, Appendix

H, for Covered Floating Roofs, 4th Edition, June 1970.

(5) That there shall be provided an approved intermediate subdike, 18 inches in height, separating the two tanks in accordance with requirements of Section 2173 (g) of NFPA standard No. 30 of the National Fire Codes, 1972-73 Edition.

(6) That all electrical equipment installed shall be that which is approved and suitable for hazardous atmospheres, as prescribed by Section 6430, including applicable provisions of Table VI-9 of NFPA Standard No. 30 of the National Fire Codes, 1972-73 Edition.

(7) That the earthen dike surrounding the tanks shall be designed to be liquid-tight and to withstand a full hydrostatic head, and so constructed as to provide the required protection. Earthen walls 3 feet or more in height shall have a flat section at the top not less than 2 feet wide. The slope of an earthen wall shall be consistent with the angle or repose of the material of which the wall is constructed.

(8) That all piping, valves and fittings shall be equal to the requirements of Chapter 3, NFPA No. 30, of the National Fire codes, 1972-73 Edition.

(9) That all construction, including tanks, tank pads, piping, piping supports, pumps, walkways, and earthen dike, shall be accomplished under permit from the Bureau of Buildings, and shall be in accordance with detailed drawings and specifications submitted to and approved by that Bureau.

Section 2. The permit herein granted shall be revocable at the pleasure of the Council and no expenditure of money hereunder or lapse of time or any act or thing shall operate as an estoppel against the City of Portland or be held to give the permittee any vested or other right; and said permit is personal to the petitioner and does not run with the land, nor may it be transferred, assigned or otherwise disposed of by said petitioner.

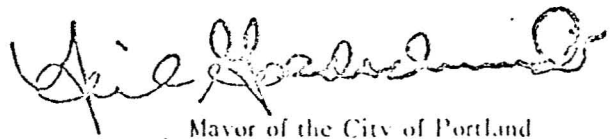
Section 3. The revocable permit provided by this ordinance shall not become effective until the permittee shall have filed with the City Auditor, in form approved by the City Attorney, a document in writing accepting the terms and conditions of this ordinance. Upon the filing of such acceptance, the City Auditor shall, at the expense of the permittee, file a certified copy of this ordinance and the acceptance thereof in the Miscellaneous Records of Multnomah County, Oregon.

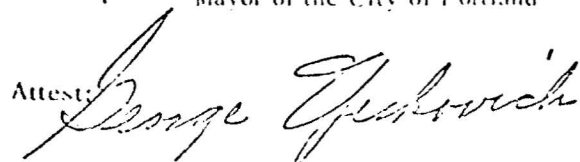
ORDINANCE No.

Section 4. Inasmuch as this ordinance is necessary for the immediate preservation of the public health, peace and safety of the City of Portland in this: In order that there may be no delay in providing needed facilities; therefore, an emergency hereby is declared to exist and this ordinance shall be in force and effect from and after its passage by the Council.

Passed by the Council, MAY 1 1973

Com'r. Ivancie
4/4/73 RLH:rf


Mayor of the City of Portland

Attest: 
Auditor of the City of Portland

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-67
W-90PPL. NO. 502 A4B DATE REC'D 02 28 1973 A. Q. C. NOTIFIED

2 - 28 - 73

377694

File 424.0

PERMIT NO. _____
VALUATION 300,000
PERMIT FEE 1070

HOUSE NO. FEE _____

DRIVEWAY FEE _____

TOTAL FEE _____

RECEIPT NO. 65617A

PLAN CHECK FEE

AMOUNT 310RECEIPT NO. 614891COMPUTED BY VPDATE FEB 28 1973FIRE DISTRICT 3 1/4 SECTION 1217LAND USE ZONE M1 CHK'D BY BP

OCCUPANCY GROUPS

BUILDING CODE J CONSTR. TYPE V

P & Z CODE _____

INITIALS BELOW IDENTIFY
PERSON RESPONSIBLE FOR
APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1 N.R. DRVWY.	<u>DD</u>	<u>2/28/73</u>
2 TRAFFIC	<u>T.P.P.</u>	<u>2-28-73</u>
3 A. Q. C.	<u>DP</u>	<u>5/4/73</u>
4 FIRE MARSHAL	<u>DP</u>	<u>5/4/73</u>
5 INDUS. WASTE	<u>DP</u>	<u>2/28/73</u>
6 STRUCT. ENGINEER	<u>RQR</u>	<u>3/5/73</u>
7 PLBG.	<u>C.E.</u>	<u>3-1-73</u>
8 ZONING	<u>W.C.P.</u>	<u>4-20-73</u>
9 HOUSE NUMBER	<u>DP</u>	<u>2/28/73</u>
10 SEWER	<u>DP</u>	<u>2/28/73</u>
11 PLAN EXAM.	<u>DP</u>	<u>5-11-73</u>
12 PERMIT ISSUED	<u>DP</u>	<u>MAY 11 1973</u>
	<u>DP</u>	<u>2/28/73</u>

RESIDENTIAL

SEPARATE PERMITS REQUIRED
FOR:

PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

FAMILY UNITS _____ ROOMS _____ STORIES _____
APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)NUMBER AND STREET 12500 NW Marina Way
BETWEEN (NAME CROSS STREETS) NELY of NW St Helens Rd.
LOT T.L. 18 SEG 34 2N 1W BLOCK _____

ADDITION _____

SIZE OF LOT 44⁺A SIZE OF BLDG. _____ OCCUPIED AS Tank FarmOWNER PGE Co ADDRESS 621 SW Alder St.BUILDER GATX ADDRESS Chicago Ill.PLANS BY GATX ADDRESS ✓ ✓

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB \$ 300,000Installation of two fuel tanks
100,000 bbl eachNO-PLBG. ALLOWED-ON-THIS-PERMIT.See Drawings Attached
as per Ord # 136486APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS
AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY
WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND,
OREGON.CITY ☐ STATE ☐LICENSED
CONTRACTOR
YES ☐ NO ☒APPLICANT DR L. J. L. L.
SIGN IN OWN HANDWRITINGNOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH
YOU MUST CALL.

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY CONTROL DIVISION
 1234 S. W. Morrison
 Portland, Oregon 97205
 Telephone: 229-5630

NOTICE OF CONSTRUCTION AND APPLICATION FOR APPROVAL

To Construct, Install, Establish or Alter an Air Contaminant Source and/or Control Facility
 (As Required by ORS 449.712)

Business Name: Portland General Electric Company Phone: 228-7181
 Address of Premises: St. Helens Rd 1 mi N of Linnton City: Portland Zip: 97205
 Nature of Business: Electric Utility
 Responsible Person to Contact: A. J. Porter Title: Senior Vice President
 Other Person Who May be Contacted: Duane Landis Title: Project Engineer
 Corporation ☒ Partnership ☐ Individual ☐ Government Agency ☐
 Present Legal Owner: Portland General Electric Company
 Legal Owner's Address: 621 S. W. Alder Street City: Portland Zip: 97205
 Description of Proposed Construction (Air Contamination Source: 8 Combustion Gas Turbines
 Description of Air Pollution Control Equipment: Special combustion systems to
minimize smoke emissions
 List Air Contaminant(s) which will be produced and/or controlled: CO, NO, NO₂, SO₂, HC,
Fine Particulate
 Estimated Cost: Basic Air Contaminant Source Equipment: \$ 15,000,000
 Air Pollution Control Equipment: \$
 Estimated Installation Date: Estimated Operation Date: August 1973
 Name of Applicant or Owner of Business: A. J. Porter
 Title: Senior Vice President Phone: 228-7181 Ext. 522
 Signature: Date:

NOTE: A Notice of Approval must be received from this Department prior to commencing construction. Further technical information may be requested within 30 days of Notice of Construction receipt in order to evaluate whether the proposed construction is capable of complying with applicable Rules and Regulations.

 (Department Use Below This Line)

Date Rec'd EI SIC Grid N/C
 Date Notification to Technical Service

H A R B O R T O N

MAXIMUM EXPECTED AVERAGE ANNUAL IMPACT

AVERAGE VENTILATION*

	SO ₂		Particulate		NO _x	
	Oil	Gas	Oil	Gas	Oil	Gas
Linnton	0	µg/m ³ --	0	µg/m ³ --	0	µg/m ³ 0
NW Industrial	3	--	1	--	21.3	16
Downtown	2	--	0.5	--	15.4	12

*Criteria from Table 6 CWAPA April 16, 1973 Staff Report: (Mixing Limited to 2500', Wind 7 mph, Wind from NW Quadrant 50% of time).

EPA UNAMAP PROGRAM SERIES

ESTIMATES OF HARBORTON IMPACT ON

AMBIENT AIR QUALITY--WORST VENTILATION DAY*

<u>Receptor Area</u>	<u>24-Hr. Average</u>		
	NO _x	SO _x	Particulate
Harborton-Rivergate-Linnton	0 µg/m ³	0 µg/m ³	0 µg/m ³
St. Johns	3	1	<1
Willbridge	9	3	1.5
NW Industrial	18	6	2.5
Downtown	24	8	3.2

*Criteria from Table 7 April 16, 1973, CWAPA Staff Report: Mixing Limited to 1000', Winds Less than 4 mph.

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE
BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-67
W-90

APPL. NO. 1849A DATE REC'D _____ A. Q. C. NOTIFIED _____

FAMILY UNITS _____ ROOMS _____ STORIES _____
APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET 12500 N. W. MARINA WAY
BETWEEN (NAME CROSS STREETS) N. ELY. OF N. W. ST. HELENS ROAD
LOT TL(R) BLOCK _____
ADDITION SEC. 34 2N 1W
SIZE OF LOT 44 ± A SIZE OF BLDG. _____ OCCUPIED AS ELEC. GEN. PLANT
OWNER PGE Co. ADDRESS 621 S. W. ALDER ST.
BUILDER DALE PENCE ADDRESS SALEM, OREGON
PLANS BY TP&M ADDRESS FARMINGTON, CONN.

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB _____
ESTIMATED VALUE OF ENCLOSURES AND CONTROL MODULES... \$125,000.00

No plng on this permit

THIS PERMIT APPLICATION COVERS TURBINE ENCLOSURE AND CONTROL MODULE.

~~PLANS TO FOLLOW~~

See 173342 for foundation drawings
FOUNDATIONS
TYPICAL OF ALL

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

APPLICANT R R Lanchis LICENSED CONTRACTOR YES ☐ NO ☐
SIGN IN OWN HANDWRITING

NOTE: SUBMIT IN DUPLICATE, KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH YOU MUST CALL.

480699

PERMIT NO. _____
VALUATION 31,200⁰⁰
PERMIT FEE 31,200⁰⁰ 25⁰⁰

HOUSE NO. FEE _____

DRIVEWAY FEE _____

TOTAL FEE _____

RECEIPT NO. 62904A

PLAN CHECK FEE _____

AMOUNT 1250

RECEIPT NO. 66994A

COMPUTED BY PFS

DATE 10-10-73

FIRE DISTRICT <u>3</u>	1/4 SECTION <u>1717</u>
LAND USE ZONE <u>M1</u>	CHK'D BY _____

OCCUPANCY GROUPS

BUILDING CODE <u>F-2</u>	CONSTR. TYPE <u>TV</u>
P & Z CODE _____	

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1 DRVWY.	<u>DD</u>	<u>6/29/73</u>
2 TRAFFIC	<u>H/R</u>	
3 A. Q. C.	<u>JS</u>	<u>10/10/73</u>
4 FIRE MARSHAL	<u>FW</u>	<u>10-10-73</u>
5 WASTE	<u>FW</u>	<u>6/29/73</u>
6 STRUCT. ENGINEER	<u>RRR</u>	<u>7/6/73</u>
7 PLBG.	<u>LB.L.</u>	<u>6-29-73</u>
8 ZONING	<u>JD</u>	<u>10-10-73</u>
9 HOUSE NUMBER	<u>FW</u>	<u>6/29/73</u>
10 SEWER	<u>SS-RR</u>	<u>6/29/73</u>
11 PLAN EXAM.	<u>RRR</u>	<u>10/10/73</u>
12 PERMIT ISSUED	<u>RRR</u>	<u>10-10-73</u>
13 info	<u>FW</u>	<u>6/29/73</u>

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

BUILDING PERMIT

No. 480699

FORM W-19
(1-1-66)CITY OF PORTLAND
BUREAU OF BUILDINGS

Rec. No.

62904A

Subject to the compliance with the ordinances of the City of Portland, permission is hereby granted to

excavate for ☒ ERECT ☐ FOUNDATION ☐ ALTER ☐ MOVE ☐ REPAIR ☐ WRECK ☐ OCCUPANCY CHANGE and a story elevenLocated at 12500 NW Marana WayLot TL (1P) Block - in Pl 342 N, 1W AdditionName of Owner PGE Estimated value 31,250 Fee 25Builder Dale PrincePermit issued 10/10 19 73C. N. CHRISTIANSEN
Building Inspections DirectorNOTE: PLUMBING, ELECTRICAL, HEATING,
STREET USE REQUIRE SEPARATE PERMITS.By [Signature]

KEEP CARD CONSPICUOUSLY POSTED ON PREMISES UNTIL JOB IS COMPLETED AND FINAL INSPECTION MADE.

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-67
VP-90

APPL. NO. 1849C DATE REC'D _____ A. Q. C. NOTIFIED _____

FAMILY UNITS _____ ROOMS _____ STORIES _____
APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

NUMBER AND STREET 12500 N. W. MARINA WAY
BETWEEN (NAME CROSS STREETS) N. ELY. OF N. W. ST. HELENS ROAD
LOT TL(18) BLOCK ---
ADDITION SEC. 34 2N 1W
SIZE OF LOT 44 ± A SIZE OF BLDG. _____ OCCUPIED AS ELECT. GEN. PLANT
OWNER PGE Co. ADDRESS 621 S. W. ALDER ST.
BUILDER DALE PENCE ADDRESS SALEM, OREGON
PLANS BY TP&M ADDRESS FARMINGTON, CONN.

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB _____
ESTIMATED VALUE OF ENCLOSURES AND CONTROL MODULES... \$125,000.00

⑦ No plng on this permit

THIS PERMIT APPLICATION COVERS TURBINE ENCLOSURE AND CONTROL MODULE.

PLANS TO FOLLOW

See 413342 for foundation drawings

FOUNDATIONS SHOWN
TYPICAL OF ALL

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

APPLICANT [Signature] LICENSED CONTRACTOR YES ☐ NO ☒
SIGN IN OWN HANDWRITING

NOTE: SUBMIT IN DUPLICATE. KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH YOU MUST CALL.

PERMIT NO. 480701
VALUATION 31,250.00
PERMIT FEE 25.00

HOUSE NO. FEE _____

DRIVEWAY FEE _____

TOTAL FEE 62904A

RECEIPT NO. 62904A

PLAN CHECK FEE 125

AMOUNT 66994A

RECEIPT NO. 66994A

COMPUTED BY PER

DATE OCT -2 1972

FIRE DISTRICT 3 1/4 SECTION 1717
LAND USE ZONE A1 CHK'D BY _____

OCCUPANCY GROUPS

BUILDING CODE F-2 CONSTR. TYPE IV

P & Z CODE _____

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM	APP'D BY	DATE
1 DRVWY.	<u>DD</u>	<u>6/29/73</u>
2 TRAFFIC	<u>H/R</u>	_____
3 A. Q. C.	<u>JS/...</u>	<u>10/10/73</u>
4 FIRE MARSHAL	<u>[Signature]</u>	<u>10-10-73</u>
5 WASTE	<u>[Signature]</u>	<u>6/29/73</u>
6 STRUCT. ENGINEER	<u>RRR</u>	<u>7/6/73</u>
7 PLBG.	<u>G.B.L.</u>	<u>6-29-73</u>
8 ZONING	<u>JD</u>	<u>10-10-73</u>
9 HOUSE NUMBER	<u>SS-Ret</u>	<u>6/29/73</u>
10 SEWER	<u>SS-Ret</u>	<u>6/29/73</u>
11 PLAN EXAM.	<u>RMAH</u>	<u>10/10/73</u>
12 PERMIT ISSUED	<u>AM</u>	<u>OCT 10 1972</u>
13 infce.	<u>Rat</u>	<u>6/29/73</u>

RESIDENTIAL

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	<input checked="" type="checkbox"/>	SPRINKLER SYSTEM	<input checked="" type="checkbox"/>
FURNACE INSTALLATION	<input checked="" type="checkbox"/>	SIGN	<input checked="" type="checkbox"/>
ELECTRICAL	<input checked="" type="checkbox"/>	CURB CUT AND DRIVEWAY	<input checked="" type="checkbox"/>
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

APPLICATION FOR PERMIT TO BUILD NEW STRUCTURE

BUREAU OF BUILDINGS, CITY OF PORTLAND, OREGON

5-67
W-90

PERMIT NO. 480702
VALUATION \$1,250.00
PERMIT FEE 25.00

APPL. NO. 18490 DATE REC'D _____ A. Q. C. NOTIFIED _____

FAMILY UNITS _____ ROOMS _____ STORIES _____

APPLICANT PLEASE COMPLETE AREA BOUNDED BY HEAVY LINE (PRINT IN INK)

HOUSE NO. FEE _____

DRIVEWAY FEE _____

TOTAL FEE _____

RECEIPT NO. 62404A

NUMBER AND STREET 12500 N. W. MARINA WAY
BETWEEN (NAME CROSS STREETS) N. ELY. OF N. W. ST. HELENS ROAD
LOT TL(18) BLOCK _____
ADDITION SEC. 34 2N 1W

PLAN CHECK FEE _____

AMOUNT 12.00

RECEIPT NO. 66994A

COMPUTED BY PKJ

DATE 6-29-73

FIRE DISTRICT 3 1/4 SECTION 1717

LAND USE ZONE M1 CHK'D BY _____

SIZE OF LOT 44 ± A SIZE OF BLDG. _____ OCCUPIED AS ELECTRICAL GEN. PLANT
OWNER PGE Co. ADDRESS 621 S. W. ALDER ST.
BUILDER DALE PENCE ADDRESS SALEM, OREGON
PLANS BY TP&M ADDRESS FARMINGTON, CONN.

OCCUPANCY GROUPS _____

BUILDING CODE F-2 CONSTR. TYPE IR

P & Z CODE _____

INITIALS BELOW IDENTIFY PERSON RESPONSIBLE FOR APPROVAL OF SPECIFIED ITEM.

ITEM APP'D BY DATE

1 DRVWY. 20 6/29/73

2 TRAFFIC NIR _____

3 A. Q. C. JS 10/10/73

4 FIRE MARSHAL DM 10-10-73

5 INDUS. WASTE Pot 6/29/73

6 STRUCT. ENGINEER RRR 7/6/73

7 PLBG. 662 6-29-73

8 ZONING JD 10-10-73

9 HOUSE NUMBER Pot 6/29/73

10 SEWER SS-Pot 6/29/73

11 PLAN EXAM. RRR 10/10/73

12 PERMIT ISSUED MD OCT 10 1973

13 INFO Pot 6/29/73

RESIDENTIAL

SEPARATE PERMITS REQUIRED FOR:

PLUMBING	X	SPRINKLER SYSTEM	X
FURNACE INSTALLATION	X	SIGN	X
ELECTRICAL	X	CURB CUT AND DRIVEWAY	X
VENTILATION		ELEVATOR AND DOORS	
INCINERATOR		RANGE HOOD AND VENT	

PRINT BELOW, IN INK, A BRIEF DESCRIPTION OF WORK TO BE DONE

ESTIMATED VALUATION OF COMPLETE JOB _____

ESTIMATED VALUE OF ENCLOSURES AND CONTROL MODULES... \$125,000.00

⑦ No plmng at this permit

THIS PERMIT APPLICATION COVERS TURBINE ENCLOSURE AND CONTROL MODULE.

PLANS TO FOLLOW:

See 473392 for foundation drawings - FOUNDATIONS SHOWN TYP. OF ALL

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR ON PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF PORTLAND, OREGON.

CITY _____ STATE _____

LICENSED CONTRACTOR

YES ☐ NO ☒

APPLICANT RRR SIGN IN OWN HANDWRITING

NOTE: KEEP BUILDING PERMIT AND COPY OF APPLICATION ON PREMISES UNTIL FINAL INSPECTION, FOR WHICH YOU MUST CALL.

PGE0094385

8-4C-205

INTER-OFFICE COMMUNICATION
PORTLAND GENERAL ELECTRIC COMPANY

Date February 21, 1975

To R. H. Short

RECEIVED

FEB 21 1975

R. D. WIMER

From N. H. Woodley *shw*

Subject Harborton Permit Chronology

Pursuant to your request for "facts" for Congressman Duncan, a considerable effort has been expended to accumulate many of the facts surrounding the historic development of the Harborton combustion gas turbine permits.

The attached detailed chronology bears witness to early Company efforts to determine which of the many then newly-formed environmental regulatory agencies had jurisdiction over any possible combustion gas turbine installations and what environmental standards and regulations applied. These early contacts included regional (CWAPA), state (DEQ), and Federal (EPA) agencies.

Following a period of preliminary feasibility siting and engineering studies, the Company decided in December, 1971, to locate a combustion gas turbine installation at the Harborton Substation site. On January 27, 1972, the Company inquired of Mr. Dale D. Cannady, City Planning Commission, as to any restrictions on the construction of the proposed combustion gas turbines at the Harborton Substation site zoned M-1 (heavy manufacturing). His response was that the Company could build any desired structure on the property after obtaining a building permit. This was confirmed in a phone conversation with Mr. Bud Dunnigan, City Bureau of Buildings, on February 2, 1972.

A building permit application was filed with the City Bureau of Buildings on or before August 7, 1972, for the complete substation foundations including combustion gas turbine foundations and imbedded items. Complete turbine, substation and fuel oil tank information accompanied the permit application as listed in Table 1. All of the drawings were subsequently stamped "APPROVED, 473342, 9/15/72, CITY OF PORTLAND." Additional building permit activity is listed in Table 2.

Additional permit activity, regulatory agency contacts, and public hearings are detailed in the attached project chronology covering the period from February 20, 1970 to the present.

To address the issue of air quality impact of the Harborton gas turbines, the Company retained Glen Odell Consulting Engineers to perform a detailed study. A copy of the Odell report is attached, the conclusion of which is stated on page 5 as:

"In conclusion, the results of this study suggest that the annual and seasonal impact of the Harborton facility is quite small. Many existing sources in the Portland area have greater impacts, and there is virtually no way Harborton can be categorized as a major contributor to long-term average pollutant concentrations in the Portland area."

R. H. Short
February 21, 1975
Page 2

To comply with City permit conditions that the Company begin immediately to search for a site to relocate the Harborton plant, PGE retained the national environmental consulting firm of Woodward-Envicon, Inc. to perform a site selection study. Since DEQ had also objected to the Harborton plant, guidelines for the relocation study were sought from them. Interpretation and application of the DEQ "proposed interim guidelines" resulted in the potential sites shown in the Woodward-Envicon report, a copy of which is enclosed. Cost penalties associated with the resulting sites exceed \$5 million with substantial additional operating cost penalties. All of the relocation sites eliminate the security aspects of having the Harborton plant near the Portland area for unpredictable emergency episodes as typified by the recent J. Hawker sabotage-extortion attempt.

NHW:kj
Attachments

cc: Senior Officers
G. J. Eicher
D. E. Heider
D. R. Miller
R. L. Welch

**Table 1. Drawings Approved by City of Portland
Bureau of Buildings
Building Permit No. 473342 September 15, 1972
Harborton Substation Including Gas Turbines**

1. TP&M* ground plan showing four turbine units and side view of two units.
2. Harborton Substation - roads and railroad plans and details includes layout of turbine units.
3. TP&M drawing showing general arrangement of turbine units and plan view showing detailed components, e.g. exhaust silencer, electric generator, air discharge, etc.
4. TP&M drawing of liquid fuel supply system (schematic).
5. TP&M drawing of gas flow schematic for Harborton Substation.
6. TP&M drawing of piping arrangement (air piping) for Harborton Substation (gas turbines shown).
7. TP&M drawing showing liquid fuel piping arrangement of four gas turbine units.
8. TP&M drawing of gas fuel piping arrangement through four gas turbine units.
9. TP&M drawing of foundation location plan of turbine units, generator foundation.
10. TP&M drawing of foundation plan and elevations for Harborton Substation.
11. TP&M drawing of foundation anchor bolt and plant locations.
12. TP&M drawing of foundation pipe locations - Harborton Substation.
13. TP&M drawing of foundation pipe locations, partial plan view.
14. TP&M drawing of miscellaneous foundation details including step pad detail, control enclosure foundation, dip stick detail, drain tank detail.
15. TP&M drawing of miscellaneous foundation details including fuel forwarding skid foundation, air start pac foundation for all four units.
16. TP&M drawing of foundation reinforcing bars.
17. TP&M drawing of foundation pile plan.
18. TP&M drawing of foundation concrete trench (cross Sections A-A through I-I).
19. TP&M drawing of foundation concrete trench (cross Sections J-J through Z-Z + AA-AA).
20. TP&M drawing of foundation trench covers - ground plan and cross-sectional plans.
21. TP&M drawing of loading diagram - Harborton Substation.
22. TP&M drawing of service connections including layout of liquid fuel tank farm, fuel forwarding station.

Reports

1. "Laboratory Testing - Proposed Harborton Substation, 1973 - 200 MW Gas Turbine Installation, Fuel Oil Tank Foundations." Prepared for PGE by Dames & Moore, September 1, 1972.
2. "Foundation Structural Analysis - Portland General Electric Company, Portland, Oregon for Harborton Substation - Project 1340A." Prepared for PGE by TP&M, September 6, 1972.

*TP&M = Turbo Power & Marine Systems, Inc. supplier of Harborton gas turbine equipment.

Table 2. Harborton Project Building Permits

<u>Title</u>	<u>Permit No.</u>	<u>Fee</u>	<u>Date Issued</u>
Switching Station (Grading)	472136	405.00	7/21/72
Substation (Foundations)*	473342	603.00	9/15/72
Fence	475876	63.00	2/16/73
Substation Control House	477510	22.00	5/4/73
Substation Maintenance Building	477627	20.50	5/10/73
Turbine Fuel Tank Farm	477694	620.00	5/11/73
Electric Generating Plant	480699	25.00	10/10/73
Electric Generating Plant	480700	25.00	10/10/73
Electric Generating Plant	480701	25.00	10/10/73
Electric Generating Plant	480702	25.00	10/10/73

*All gas turbine and tank farm drawings (22) submitted with application and were approved.

Harborton Combustion Gas Turbine Permit Chronology
Portland General Electric Company

February 20, 1970 Our first contact with CWAPA* to determine what air pollution regulations apply to combustion gas turbines. Emission standards existed for visible air contaminant for new sources which was Ringelmann No. 1. The Particulate Matter Weight Standard was Bacharach Smoke Spot No. 4 for distillate fuels. Also, sulfur dioxide and particulate matter emission standards existed.

 Ambient standards also existed for particulate matter, odors, and sulfur dioxide.

 There were no nitrogen oxide emission or ambient standards.

March 16, 1970 In a meeting with CWAPA we were informed that Rule 5 "Notice of Construction and procedure for Approval" would apply to our gas turbine project. There would be no permit fee and 30 to 60 days maximum would be required for approval to construct. Discussed Station L location and fuel tank vapor recovery system requirement (Sec. 6.9).

August 26, 1970 Purchase Order issued for clearing of the Harborton Substation site.

October 20, 1970 Work order estimate for clearing Harborton site was approved.

November, 1970 PGE "Advanced Construction Program, 1972-1976" issued including the following plans: (a) Proposed generation indicated a gas turbine installation at Station "L" in 1976; (b) installation of a 230-115-kV bulk power transformer at Harborton in 1974.

January 6, 1971 PGE letter to Ogden Beeman, Port of Portland, discussing disposal area for 500,000 cu yds of dredge material.

February 26, 1971 CWAPA - Air pollution agency contacts which should be made by PGE. Dick Hatchard told us John Kowalczyk should be our contact and he will coordinate with the DEQ.

March, 1971 PGE Generation Resources Investigation Team investigating several locations for combustion turbine installation in Portland and Salem from a system standpoint.

March 8, 1971 Letter from PGE to Dames & Moore stating that PGE planned to construct a substation at Harborton in about two years.

*CWAPA = Columbia Willamette Air Pollution Authority.

March 9, 1971 EPA - Notification to Region 10 EPA by PGE on proposed gas turbine installations. Told us to deal with local agency. CWAPA is funded in part by Federal funds which gives EPA direct control. Interstate coordination procedures not yet established, however, EPA will be the liaison.

March 16-18, 1971 Day and night ambient sound readings made at Harborton and Bethel sites.

May 27, 1971 CWAPA - Discussion of CWAPA site preferences for gas turbine installations. Among sites considered were Stations L & E.

June 1, 1971 DEQ - Initial contact to notify agency of proposed gas turbine installations by PGE. DEQ informed PGE that Oregon does not have an SO₂ problem.

June 2, 1971 CWAPA - Letter received from Hatchard opposing Station L & E sites due to high ambient particulate levels already existing in those areas.

July, 1971 PGE preliminary "1972 Major Job Construction Budget" issued which included: (a) Gas turbine peaking power plants at site(s) to be selected.

July 21, 1971 Internal correspondence memo mentioning that we should clear an additional 10 acres for possible gas turbine site. This is the first mention that Harborton was being considered for gas turbine installation.

July 28, 1971 Port of Portland letter to PGE transmitting the soil disposal permit for PGE's signature. The dredging was scheduled to start October 1, 1971. The disposal permit was executed by PGE on August 3, 1971.

August 3-4, 1971 Day and night ambient sound readings made at Harborton site.

August 16, 1971 PGE Purchase Order issued to Pettijohn Engineering Company for dike construction at Harborton.

August 31, 1971 Diking plan No. D6006 issued.

September 13, 1971 Generation Resources Investigation Team memo stating evaluation of turbine generator bids would be based on 200 MW at Harborton and 100 MW at Bethel but that final sites had not yet been determined.

October 4, 1971 CWAPA - Determine if preliminary emission data figures supplied by gas turbine vendors would be acceptable to CWAPA for the Rivergate-Harborton areas. CWAPA favored Harborton over Rivergate but expressed concern over high particulate loading at Harborton. They stated NO_x is not a problem for Portland but SO_x could be a problem when particulate levels are high.

October 14, 1971 CWAPA - Meeting to supply additional preliminary emission data figures to CWAPA. Kowalczyk indicated that without detailed study of the data it appeared that the Harborton installation would be acceptable. Subsequent to meeting detailed emission data from TP&M proposal was transmitted to CWAPA.

October 18, 1971 DEQ - Meeting with L. B. Day and staff members to discuss silencing treatment to be installed on PGE's proposed gas turbine installations.

October 19, 1971 DEQ - Copies of sound pressure level diagrams of ambient sound level readings at Bethel and Harborton Substations sent to Hal Burkitt along with background technical data.

October 21, 1971 Application for Conditional Use Permit submitted to City of Portland for dredge fill.

October 28, 1971 CWAPA - John Kowalczyk called to inform us that "gas turbines and jet engines" were specifically exempted from registration (Rule 5) but "not necessarily exempt from control requirements."

November, 1971 PGE Advance Construction Program 1973-1977 and the 1972 Construction Budget indicate combustion turbines at Harborton.

November 1, 1971 DEQ - Mailed NEMA Gas Turbine Sound Standard and other technical references to Hal Burkitt in response to phone request.

November 8, 1971 DEQ - Mailed additional noise technical reference material to Rich Armstrong in response to phone request.

November 9, 1971 DEQ - Letter from L. B. Day transmitting staff review of PGE combustion turbine noise control program. Review confirmed that PGE has come close to the goal of no noticeable increase in ambient sound pressure levels at the residences nearest the sites.

November 23, 1971 City of Portland - Conditional Use Permit No. 76-71 granted for Harborton site dredge fill.

December 13, 1971 TP&M contract signed - combustion gas turbines purchased.

December 21, 1971 CWAPA - Submission of completed form of Notice of Construction and Application for Approval of Proposed Gas Turbine Peaking Plant by PGE to CWAPA.

January 18, 1972 CWAPA - Sound simulation tests performed by TP&M at Harborton. Tests were witnessed by representatives from DEQ, CWAPA, TP&M and PGE.

January 27, 1972 PGE memorandum from C. J. Irelan stating Portland Planning Commission (Mr. Cannady) advice that Zone M-1 permitted construction of Harborton without conditional use permit. Standard Building Permits would be required.

February 1, 1972 CWAPA - Correspondence by PGE supplying exhaust gas flow rates at specific temperatures for one gas turbine installation.

February 2, 1972 D. R. Landis' telephone call to City Hall for answer on Conditional Use and Building Permit question. Answer from Building Permit Dept. (Bud Dunnigan) that no Conditional Use Permit was needed and only Standard Building Permits required for construction of the Harborton station.

CWAPA - Meeting to discuss air monitoring equipment at the Harborton gas turbine site.

February 7, 1972 DEQ, CWAPA - Submitted a complete copy of TP&M sound demonstration report of January 18 tests.

March 1, 1972 CWAPA - Meeting to further discuss sulfur dioxide emission data of proposed gas turbine installation at the Harborton site. Kowalczyk stated PGE will be required to monitor ambient air quality, particulate emission, fuel analysis, and notify CWAPA when plant is operated.

March 16, 1972 CWAPA - Letter from Kowalczyk stating that a construction permit is not required by PGE for gas turbine installation at the Harborton site. Letter stated they find no major objection and listed extensive requirements to be placed on operation.

May 30, 1972 PUC - Meeting with Dave Piper to review PGE plans for gas turbine installation.

July 1, 1972 CWAPA rules revised to include new ambient air standards for sulfur dioxide, particulate matter, odors, and added standards for carbon monoxide, photochemical oxidants, hydrocarbons, and nitrogen dioxide.

Revision of emission standards changed the Particulate Matter Weight Standard to Bacharach Smoke Spot No. 2 for distillate fuels and added Smoke Spot No. 4 restrictions for residual fuels. (Note, this was after Harborton turbines had been purchased).

The sulfur dioxide emission standard was also changed and an "Other Emissions" category was added to cover "any emission.... which causes or is likely to cause injury, detriment or nuisance to the public....business or property."

Sulfur content of fuels was also added to regulations restricting No. 1 distillate fuel to 0.3 percent sulfur and No. 2 fuel to 0.5 percent sulfur.

July 24, 1972	City of Portland - Building Permit No. 472136 issued for Harborton site grading.
July 27, 1972	DEQ - Adoption of air contaminant discharge permit regulations by the Environmental Quality Commission.
August 3, 1972	CWAPA - Meeting to clarify certain requirements of their March 16 letter. CWAPA requested more data to back up the A-9 test described in a Truesdail Lab report also submitted at this meeting.
August 15, 1972	CWAPA - Letter from Kowalczyk clarifying data requests of their March 16 letter and August 3 meeting.
September 7, 1972	CWAPA, PGE - Trip to Wisconsin Power & Light, Edgerton, Wisconsin.
September 14, 1972	City of Portland - Building Permit reference No. 2476 issued for turbine and switchyard foundations including piling.
September 22, 1972	DEQ - Copy of memo received from Jim Welch, Managing Editor, CAPITOL Journal to DEQ describing visit to Wisconsin.
October 17, 1972	DEQ - Letter from Gary Sandberg referencing Welch's memo and requesting information on low frequency noise and noise abatement procedures. Questions were subsequently answered on November 3 in meeting with Sandberg and November 7 phone conversation.
October 27, 1972	By letter CWAPA notified PGE that "an application for an air contaminant discharge permit must be filed with CWAPA for new fuel burning equipment burning distillate oil at the Harborton gas turbine facility." This was to be in compliance with new CWAPA regulations effective November 10, 1972.
November 9, 1972	CWAPA - Meeting to discuss preparation of discharge permit application and PUC hearing.
November 10, 1972	CWAPA - Truesdail Lab test report and procedures A-9 engine sent to Kowalczyk.
November 13, 1972	Letter to O'Scannlain, PUC from Hatchard, CWAPA confirming Station L and E site denial by CWAPA and "no major objection to the proposed facility" at Harborton.
November 16, 1972	PUC - DEQ Public Hearing - Salem.
January 17, 1973	CWAPA - Notice of Construction and application for approval of Harborton fuel tanks sent to CWAPA staff.
January 29, 1973	CWAPA - Application for Harborton fuel tank construction approval.
February 16, 1973	City of Portland - Building Permit No. 475876 issued for Harborton site fencing.
February 20, 1973	City of Portland - Letter and fee sent requesting permission to construct Harborton fuel tanks.
February 23, 1973	CWAPA - Air contaminant discharge permit application submitted.

February 26, 1973	DEQ - Letter from D. F. O'Scannlain requesting plans for Harborton noise control and stating "acceptable" maximum sound pressure levels.
March 15, 1973	DEQ - Letter to D. F. O'Scannlain from PGE describing plans for Harborton noise control and agreeing "to ensure that community noise levels are kept within satisfactory bounds."
March 28, 1973	CWAPA - Air contaminant discharge permit accepted for filing.
April 12, 1973	Portland City Council - Council consideration of emergency ordinance to allow construction of Harborton fuel storage tanks. Erroneously referred to City Planning Commission. City of Portland - PGE first informed that Planning Commission may require M-1 conditional use permit.
April 23, 1973	City of Portland - Building Permit No. 477510 issued for Harborton substation control house.
April 27, 1973	CWAPA - Public informational hearing on proposed air contaminant discharge permit - City Hall annex, a.m.
May 3, 1973	Portland City Council - Consideration of emergency ordinance to allow construction of Harborton fuel storage tanks. City of Portland - Applied to Planning Commission for M-1 Conditional Use Permit for Harborton plant.
May 7, 1973	CWAPA - Continuation of April 27 hearing - Roosevelt High School, evening.
May 10, 1973	Portland City Council - Continuation of May 3 hearing. Emergency Ordinance No. 136486 passed to allow Harborton fuel tank construction.
May 11, 1973	City of Portland - Building Permit No. 477627 issued for Harborton maintenance building. Also, Building Permit No. 477694 issued for Harborton fuel tanks.
May 14, 1973	DEQ - Letter to D. F. O'Scannlain from PGE agreeing to conditions of 4/17/73 DEQ letter.
May 18, 1973	CWAPA - Continuation of May 7 hearing - Water Bureau Bldg., a.m.
May 22, 1973	CWAPA - Technical meeting with vendors, intervenors, CWAPA staff and PGE - CWAPA offices, a.m.

May 24, 1973 CWAPA - Special meeting of Board to rule on permit application - Board voted to direct staff to deny permit - City Council Chambers, a.m.

May 25, 1973 CWAPA - Letter from Hatchard advising PGE of CWAPA intent to deny Application for Air Contaminant Discharge Permit.

May 29, 1973 CWAPA - Letter to Hatchard from PGE requesting rehearing or permit issuance.

June 4, 1973 City of Portland - Withdrew Application for M-1 Conditional Use Permit from Planning Commission due to lack of CWAPA decision.

June 15, 1973 CWAPA - Hearing on appeal by PGE of CWAPA intent to deny an Air Contaminant Discharge Permit.

June 22, 1973 CWAPA - Continuation of June 15 hearing. Hearing was recessed indefinitely.

June 30, 1973 CWAPA dissolved.

July 2, 1973 DEQ - Application filed for Harborton Air Contaminant Discharge Permit.

July 11, 1973 City of Portland - Re-applied to Planning Commission for M-1 Conditional Use Permit.

July 27, 1973 City of Portland - Council Staff tour of Bethel Plant.

August 3, 1973 City of Portland - Submitted Environmental Report on Harborton to City Planning Commission and City Council.

August 8, 1973 Harborton Citizens - Harborton Subdivision residents tour of Bethel plant.

August 9, 1973 DEQ - Delivered copies of Harborton Environmental Report to Department offices.

August 13, 1973 EQC - Public hearing on proposed DEQ Air Contaminant Discharge Permit. Multnomah County Court House.

August 18, 1973 City of Portland - Planning Commission tour of Harborton site.

August 25, 1973 City of Portland - Planning Commission tour of Bethel plant.

August 29-30, 1973 City of Portland - Public hearings before Planning Commission on M-1 Zone Conditional Use for Harborton. Roosevelt High School Auditorium. Hearings extended.

September 5, 1973 City of Portland - Planning Commission public hearing on Harborton conditional use permit. Roosevelt High School. Voted to issue permit but with six conditions including expiration September 1, 1975 and irrevocable waiver of right to reapply.

September 6, 1973 DEQ - Technical information meeting on NOx control with vendors, intervenors, DEQ, EPA, City of Portland and PGE. See May 22, 1973.

 EPA - Eric Noble, EPA, Durham, N. C. and Ben Eusebio, EPA Region 10, Seattle toured Harborton and Bethel sites.

September 21, 1973 EQC - Commission meeting to vote on issuance of Harborton air contaminant discharge permit. Permit issued by unanimous vote.

September 26, 1973 City of Portland - Council hearing on appeal of Planning Commission Harborton conditional use permit restrictions. Hearing extended to October 5.

October 5, 1973 City of Portland - Council hearing (public meeting No. 15) continuation of September 26 hearing.

October 8, 1973 City of Portland - Conclusion of Council hearings with vote of 4-1 to issue one-year permit with restrictions to relocate at end of one year and provide monthly progress reports to City on relocation efforts. (Total of 16 public meetings).

October 17, 1973 Report submitted to City Council on Combustion Gas Turbine Siting Alternative Considerations for Harborton in compliance with Condition (d), page 3, Ordinance No. 137437 dated October 11, 1973.

November 6, 1973 Letter to PGE from DEQ authorizing testing of Harborton turbines.

November 8, 1973 Letter to DEQ from PGE presenting estimates of gas availability during the winter of 1973-74 as prepared by Northwest Natural Gas Company.

November 30, 1973 Letter to Commissioner of Public Utilities transmitting copy of Interim Report on Gas Turbine Alternative Siting for Harborton.

December 7, 1973 Letter to CRAG from PGE transmitting location maps of proposed alternate sites for the Harborton installation.

December 11, 1973 Letter from CRAG to PGE acknowledging receipt of letter of December 7 and advising of prompt response by February 1, 1974.

December 19, 1973 Letter to DEQ from PGE requesting the clearance required by Section 5.6 of Air Contaminant Discharge Permit No. 26-2499 for Harborton to conduct a series of tests on Unit 3A to determine what changes in combustion system configuration could be made to reduce CO emission levels.

December 21, 1973 Letter to DEQ from PGE presenting Company position regarding provisions of Air Contaminant Discharge Permit No. 26-2499 for Harborton facility.

December 27, 1973 Letter to PGE from DEQ advising that proposed carbon monoxide emission reduction program contained in letter of December 21 is approved.

December 28, 1973 Projected operating and fuel use schedule for Harborton submitted to DEQ for the 13-month period ending August 31, 1975.

January 1, 1974 Submittal of Interim Monthly Report on Combustion Gas Turbine Alternative Siting for Harborton to the City of Portland in compliance with Ordinance No. 137437.

January 7, 1974 In response to telephone call from DEQ, sound level measurements including octave band analyses were made at Harborton with Units 2 and 4 operational at base load.

January 10, 1974 DEQ meeting with PGE to discuss sites being investigated for possible relocation of Harborton.

Letter to PGE from DEQ summarizing status of compliance with conditions of Air Contaminant Discharge Permit No. 26-2499.

January 14, 1974 Letter to DEQ from PGE requesting review of four proposed sites for relocation of the Harborton installation.

February 1, 1974 Interim Monthly Report on Combustion Gas Turbine Alternative Siting for Harborton submitted to City of Portland in compliance with Ordinance No. 137437.

February 6, 1974 Letter to DEQ from PGE responding to letter of January 10 concerning compliance with Harborton Air Contaminant Discharge Permit No. 26-2499.

February 19, 1974 Letter to PGE from DEQ requesting operation of Harborton installation on February 28, 1974 for noise measurements.

February 26, 1974 Letter to PGE from DEQ commenting on letter of January 14 regarding review of proposed sites for relocation of Harborton facility. Letter described proposed DEQ interim guidelines to be used in evaluating potential gas turbine sites.

February 27, 1974	Letter to City of Portland from PGE advising of Company's plans to make application for a continuance of the permit to operate Harborton.
March 4, 1974	Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to the City of Portland in compliance with Ordinance No. 137437.
March 7, 1974	Meeting with Woodward-Lundgren & Associates regarding possible map study to determine alternate sites for Harborton facility based on interim guidelines recommended by DEQ in letter of February 26.
March 11, 1974	Letter to DEQ from PGE accompanied by complete and condensed versions of the emissions test reports prepared for PGE by Glen Odell Consulting Engineers. These reports presented the results of the December 1973 - January 1974 engines test series at Harborton.
March 22, 1974	DEQ required noise testing of Harborton facility.
April 1, 1974	Interim Monthly Report on Combustion Gas Turbine Alternate Siting for Harborton submitted to City of Portland, advising, among other things, that PGE planned to retain the services of Woodward-Envicon to assist in finding an alternate site for Harborton.
April 12, 1974	Submittal of monthly report data for March 1974 to DEQ for Harborton gas turbines and ambient monitors pursuant to Section 4.1 of the Air Contaminant Discharge Permit No. 26-2499.
April 17, 1974	Joint meeting with DEQ, PGE, TP&M and Koppers/Environmental Elements to discuss technical aspects of noise control at Bethel and Harborton.
April 23, 1974	Letter to PGE from DEQ requesting a revised operating schedule for Harborton for the period July 1, 1974 to August 31, 1975.
April 25, 1974	Woodward-Envicon of San Francisco contracted to perform Harborton Combustion Gas Turbine Relocation Siting Study.
May 1, 1974	Interim Report on Combustion Gas Turbine Alternative Siting for Harborton submitted to City of Portland in compliance with Ordinance No. 137437.
May 3, 1974	Letter to DEQ from PGE providing information regarding operating schedules, exhaust emission data and sound suppression levels in response to letter of April 23.

May 15, 1974 Submittal of monthly report for Harborton to DEQ in accordance with Section 4.1 of Air Contaminant Discharge Permit No. 26-2499.

Letter to DEQ from PGE requesting permission to conduct full emission tests on Unit 3A at Harborton during week of May 20-24.

May 23, 1974 Public Hearing Notice from DEQ concerning modification of Air Contaminant Discharge Permit No. 26-2499 for Harborton to be held June 28.

May 24, 1974 EQC meeting at Portland Public Service Building. Agenda included DEQ status report on compliance of Harborton plant with Air Contaminant Discharge Permit No. 26-2499. DEQ Director suggested authorization of a Public Hearing before a Hearings Officer in Portland to consider modifying Harborton permit in accordance with DEQ staff recommendations.

May 30, 1974 Copy of letter from TP&M to PGE concerning design adequacy of sound suppression systems proposed for Bethel and Harborton facilities submitted to DEQ.

June 1, 1974 Interim Report on Combustion Gas Turbine Alternative Siting for Harborton submitted to City of Portland in compliance with condition (d), page 3, of Ordinance No. 137437 dated October 11, 1973.

June 3, 1974 Called CRAG with regard to status of land use siting review previously promised by February 1, 1974.

June 20, 1974 Letter to PGE from DEQ accompanied by proposed Amendment 1 to Harborton Air Contaminant Discharge Permit to be presented at June 28 public hearing in Portland.

June 28, 1974 DEQ public hearing to consider modifications to Air Contaminant Discharge Permit for Harborton. Hearings Officer Thomas Guilbert conducted hearing in City Hall Council Chambers.

July 1, 1974 Interim report on Combustion Gas Turbine Alternative Siting for Harborton submitted to City of Portland in compliance with Ordinance No. 137437.

July 5, 1974 Letter to City of Portland from PGE requesting amendment of Conditional Use Permit granted by Ordinance No. 137437 for continued operation of Harborton because the interim guidelines for gas turbine siting proposed by DEQ in letter of February 26 required significant changes in siting criteria. The letter advised that a suitable site for relocation could not be selected by October 11, 1974.

July 12, 1974 Transmittal of operations manuals for oil storage and transfer facilities at Station L, Harborton and Beaver to DEQ for comment.

July 17, 1974	City Council adopted as amended the report of the Commissioner of Public Utilities on the request from PGE for an extension of time for operation of Harborton until the Trojan Nuclear Plant commences commercial operation.
July 24, 1974	Telephone conversation with CRAG to inquire on status of land use review for relocation siting. Review originally promised by February 1 would be mailed by July 25.
July 29, 1974	Hearing before David Don, Hearings Officer, City of Portland, regarding extension of operating permit for Harborton.
July 30, 1974	Continuance of hearing of July 29.
August 1, 1974	Interim Report on Combustion Gas Turbine Alternative Siting for Harborton submitted to City of Portland in compliance with condition (d), page 3 of Ordinance No. 137437 dated October 11, 1973.
September 3, 1974	Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to the City of Portland in compliance with condition (d), page 3 of Ordinance No. 137437 dated October 11, 1973.
September 20, 1974	The conclusions of Hearings Officer David Don based on testimony taken at the July 29 and 30 hearings regarding the request by PGE for an extension of operating time to operate the Harborton plant transmitted to the City Council by Commissioner Ivancie.
October 2, 1974	Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to City of Portland in compliance with condition (d), page 3 of Ordinance No. 137437 dated October 11, 1973.
October 10, 1974	City Council passed Ordinance No. 138949 which allowed PGE to operate Harborton under certain conditions for 60 days to allow the Council and PGE adequate time to review the transcript of the hearing before Mr. David Don in July.
November 5, 1974	Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to the City of Portland in compliance with condition (d), page 3 of Ordinance No. 137437 dated October 11, 1973.
November 6, 1974	Letter from DEQ to PGE transmitting Addendum No. 1 to the Air Contaminant Discharge Permit for Harborton. This addendum included adjusted emission limitations, noise compliance schedule and air monitoring program requirement.

November 18, 1974 Letter from Estes Snedecor of PGE to Mr. Francis J. Ivancie, City of Portland transmitting final Site Selection Study: Harborton Generating Plant Relocation as prepared by Woodward-Envicon, Inc.

November 20, 1974 Letter from PGE to DEQ informing that the muffler installation schedule for noise suppression at Harborton could not meet required completion date of January 31, 1975 because of design modifications by TP&M. Letter requested extension of compliance date until April 1, 1975.

December 3, 1974 Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to City of Portland in compliance with condition (d), page 3, Ordinance No. 137437 dated October 11, 1973.

December 9, 1974 Letter from PGE to City of Portland transmitting copies of a long-term assessment of the air quality impact of Harborton prepared by F. Glen Odell Consulting Engineers under contract to PGE.

December 24, 1974 Letter from DEQ to PGE in reply to request for extension of schedule for muffler installation to April 1, 1975. Letter states that DEQ did not wish to modify permit until firm schedule for installation was received from Turbo Power & Marine Systems.

January 2, 1975 Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to the City of Portland in compliance with the condition (d), page 3 of Ordinance No. 137437 dated October 11, 1973.

January 22, 1975 City of Portland approves one-year operating permit for the Harborton turbines. The permit is for 240 hours of operation excluding any for testing purposes. Additional operating time may be granted upon showing of need.

February 3, 1975 Interim Report on Combustion Gas Turbine Alternative Siting for Harborton to the City of Portland in compliance with condition (f), page 3, Ordinance No. 139381 dated January 22, 1975.

February 6, 1975 Meeting with DEQ regarding relocation of the Harborton facility based upon the proposed interim guidelines for siting gas turbines contained in the February 26, 1974 DEQ letter to PGE.

CITY OF PORTLAND
INTER-OFFICE CORRESPONDENCE
(NOT FOR MAILING)

November 23, 1971

From Dept. of Public Affairs, City Planning Commission
To Dept. of Public Affairs, Bureau of Buildings
Addressed to C. N. Christiansen, Building Inspections Director
Subject Conditional Use Request No. CU 76-71

Dear Mr. Christiansen:

On November 23, 1971, the Zoning Committee of the City Planning Commission met and considered the following Conditional Use request:

Applicant: Portland General Electric Co., deedholder

Conditional Use Requested: Diking and filling

On property legally described as: Tax Lot 18, Section 34,
T2N, R1W, W.M.

In zone: M1


Located at: Willamette River and Multnomah Channel easterly
of S.P.&S. right-of-way and Lower Columbia River Highway

The Committee action was as follows: Approval contingent upon approval of listed agencies and subject to whatever conditions may be recommended by these agencies.

Waive 14-day waiting period.

Sincerely,

mlt


Lloyd T. Keefe
Planning Director

PC CU-01
1-70 500

STAFF REPORT

File: CU 76-71

Committee Meeting: November 23, 1971

Applicant: Portland General Electric Co., deedholder

Conditional Use Request: Diking and filling

Location: At Willamette River and Multnomah Channel easterly of S.P.&S. right-of-way and Lower Columbia River Highway

Legal Description: Tax Lot 18, Section 34, T2N, R1W, W.M.

Zone: M1

Quarter Section: 1717

Applicant's Proposal: To dike and fill a portion of Tax Lot 18. The area is to be used for the major substation and switching center for the electric power that is to be generated at the Trojan Nuclear Plant. The filling and diking of this parcel of land is necessary to protect the proposed substation from flooding.

The area has been diked and filled to the top of the dike by a dredge fill.

Code Considerations: Filling is permitted in zone M1 as a Conditional Use.

The following agencies have been notified: City Engineer's Office, Traffic Engineer, the Port of Portland, State of Oregon Fish Commission, State of Oregon Land Division, U.S. Army Corps of Engineers - Portland District.

Surrounding Conditions: This area is located adjacent to Willamette River at the head of Multnomah Channel. Along the south is Bonneville Power Transmission Line. To the southwest is S.P.&S. right-of-way and beyond this is the Lower Columbia River Highway.

Recommendation: The staff will recommend approval of this fill, but we suggest that the Planning Commission not give its stamp of approval until some developmental problems are explored further and until the various agencies which have been notified have been heard from. At this writing none but the Traffic Engineer has replied. He has no objection.

Staff Report
CU 76-71

Actually this fill is practically completed. Operations must have proceeded throughout the summer. The staff has no objection to the fill as such and would recommend it for any owner applying. However, the proposed major substation and the transmission lines converging on it pose some serious questions requiring answers.

✓
oil
storage
& delivery
First, to use this prime frontage on deep water seems to be a misuse of land which should be reserved for water-oriented industry and/or water transportation activities. Does Portland General Electric want to eliminate potential customers in this way when presumably several other substation sites would serve equally as well and not take up harbor land which may be nearing short supply?

Second, the proposed Rivergate Freeway and Willamette River crossing, so vital to the future of the Rivergate Industrial District of the Port of Portland, traverses part of P.G.E.'s tract. Although the diked area now being filled is clear of the proposed route except for possibly the northern corner, a larger area is being requested for filling and if used for the substation would obstruct the route and/or may cause a diversion because of safety considerations with respect to heights and locations of the converging transmission lines.

✓
aesthetic
towers
alternate
routes
over
less
desirable
Sanities
Island
Third, the environmental impact of the transmission lines themselves need exploration. What are the specific routes? Will more heavy voltage lines slice through Forest Park? Will additional river crossings be required or will the present Bonneville Towers suffice? A new City Utility Co. Committee on undergrounding needs to be consulted. Have the Park Bureau and the Forest Park Committee consented to additional lines?

Hopefully some of these questions can be explored before the Zoning Committee meeting on November 23.

LTK/RPA/mlt

JUL 5 1973

SYSTEM CONTRACT CONSTRUCTION DIVISION
FILE REFERENCE NO. 424.0

PORTLAND GENERAL ELECTRIC COMPANY

ELECTRIC BUILDING

PORTLAND, OREGON 97205

GEORGE J. EICHER

MANAGER

DEPT. OF ENVIRONMENTAL SERVICES

July 5, 1973

Mr. Harold L. Sawyer
Administrator, Water Quality Division
Oregon DEQ
1234 S. W. Morrison St.
Portland, Oregon 97205

Dear Mr. Sawyer:

In a recent phone conversation you and Jim Chandler, of this department, discussed hydrostatic tests on fuel tanks which PGE needs to make at its Harborton Gas Turbine site. You indicated PGE would not need a discharge permit to dispose of water from the tests. However, you did require a letter containing information to make DEQ cognizant of details. Upon receipt of this, and approval of details by your staff, a letter would be sent from DEQ authorizing PGE to conduct the tests.

Enclosed is the information you requested. I trust it is satisfactory to warrant approval by DEQ. Should you need more information, please contact Jim or me.

Very truly yours,

George J. Eicher, Manager
Dept. of Environmental Services

GJE:JLC:sw

Enclosure

1. Total volume of water to be used:

Approximately 4,200,000 gallons. After completion of hydrostatic test on the first tank, the water will be pumped to the second one.

2. Source of water supply:

8-inch fire main on the site.

3. Rate of discharge:

Approximately 1,000 gal/min.

4. Name of receiving water of discharge:

Willamette River

5. Date or dates of test:

Approximately July 10, 1973 continuing through July 31, 1973.

6. Geographic location of test:

12,500 N. W. Marina Way, approximately 2 miles north of Linnton, Oregon.

7. Purpose of test:

Tank settlement and leak.

JUL 18 1973

HDSN-BETHEL

4/2 def.



DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JUL 18 1973

D. P. MILLER, Manager
ENGINEERING

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

TOM McCALL
GOVERNOR

DIARMUID F. O'SCANNLAIN
Director

July 16, 1973

Portland General Electric Company
Electric Building
Portland, Oregon 97205

Attention: Mr. George J. Eicher, Manager
Department of Environmental Services

Gentlemen:

Your letter of July 5, 1973 requesting permission to discharge approximately 4.2 million gallons of city water to the Willamette River after use for hydrostatic testing of two new tanks in the Linnton area has been received. It is our understanding that this water will not come in contact with any oil and is not expected to be contaminated in the testing process by anything except possibly rust.

You are hereby authorized to discharge the water in accordance with your request.

Very truly yours,

DIARMUID F. O'SCANNLAIN
Director

Harold L. Sawyer
Administrator -
Water Quality Division

HLS:ak

cc: District Office



CITY OF
PORTLAND, OREGON

OFFICE OF CITY AUDITOR

Jewel Lansing, City Auditor
Council Division
Edna Cervera, Manager
1220 S.W. 5th, Rm. 202
Portland, Oregon 97204
(503) 248-4082

COLUMBIA - WILLAMETTE
DEVELOPMENT COMPANY

March 31, 1986

APR 01 1986

GP 3-86

Columbia-Willamette Development Company
c/o Bruce Ostly/Linda Bentz
920 SW Third, #300
Portland, OR 97204

Gentlemen:

Enclosed is a copy of the decision on GP 3-86 approving with conditions a Minor Greenway permit for stockpiling fill (approximately 40,000 cubic yards) at PGE's Harborton site on Tax Lot 18, Section 34, T2N, R1W.

To comply with the Planning and Zoning Code, please return properly executed acceptances of Columbia-Willamette Development Company and Portland General Electric along with a check for \$13.00 payable to Multnomah County Recorder to record the decision in Multnomah County deed records. A return envelope is provided for your convenience. The action is null and void if acceptance and check are not received by May 1, 1986.

Yours very truly,

Edna Cervera
Principal Deputy City Auditor

EC:cjw
Enclosures
2628C

ACCEPTANCE

Portland, Oregon March 31 19 86

JEWEL LANSING
Auditor of the City of Portland
Room 202, City Hall
Portland, Oregon 97204

This is to advise the City of Portland, Oregon, that I hereby accept the terms and provisions of

GP 3-86 approving with conditions a Minor Greenway permit for stockpiling
fill (approximately 40,000 cubic yards) at PGE's Harborton site on Tax Lot
18, Section 34, T2N, R1W ,

and in consideration of the benefits to be received thereunder by me I hereby agree to abide by and
perform each and all of the terms and provisions thereof applicable to me.

Very truly yours,

Columbia-Willamette Development Company

Linda M. Benty

920 SW Third, #300, 97204

Address

Approved as to form:

City Attorney

*When an acceptance is signed by an officer of a firm or corporation, his or her official title must
be stated.

ACCEPTANCE

Portland, Oregon March 31 19 86

JEWEL LANSING
Auditor of the City of Portland
Room 202, City Hall
Portland, Oregon 97204

This is to advise the City of Portland, Oregon, that I hereby accept the terms and provisions of

GP 3-86 approving with conditions a Minor Greenway permit for stockpiling fill (approximately 40,000 cubic yards) at PGE's Harborton site on Tax Lot 18, Section 34, T2N, R1W.

and in consideration of the benefits to be received thereunder by me I hereby agree to abide by and perform each and all of the terms and provisions thereof applicable to me.

Very truly yours,

~~Portland General Electric~~

Paul J. Schumacher

121 SW Salmon St. 97204
Address

Approved as to form.

City Attorney

*When an acceptance is signed by an officer of a firm or corporation, his or her official title must be stated.

COLUMBIA-
WILLAMETTE
DEVELOPMENT
COMPANY



RECEIVED

MAR 28 1986
PROPERTY DEPT.

FILED 6.21.3711
LAND 18
Permits-HARBORTON

26 March 1986

Mr. M. D. Paine
District Maintenance Supervisor
Oregon State Highway Division
9002 S. E. McLoughlin Boulevard
Portland, OR 97222

Dear Mr. Paine:

Re: Cancellation of Permit to Dispose of
Fill Material at Harborton

Columbia-Willamette Development Company (CWDC) is a wholly-owned real estate development subsidiary of Portland General Electric Company (PGE). Part of our responsibilities include management of the undeveloped portion of PGE's Harborton site.

We have been planning to take advantage of an opportunity to obtain some fill material from the ODOT road improvement projects in process this year. In doing so, we have found the area at Harborton between the private drive where you have been dumping highway scrapings and the river is a wetlands as defined by the U. S. Army Corps of Engineers. This means that no development activity can take place without a Corps permit for that area, which CWDC does not have at this time.

The permit from PGE dated January 21, 1983, to dispose of fill materials at Harborton hereby is canceled. This has been discussed with Randy Inloes; and as you are aware, a gate has been installed to prevent further use of the area. I am aware some rock is being stored there that will need to be accessed for rip-rap. I will make arrangements with Randy for this.

COLUMBIA-
WILLAMETTE
DEVELOPMENT
COMPANY

Mr. M. D. Paine
Page 2
26 March 1986

The original permit was given to accommodate the Highway Division in its road maintenance efforts along St. Helens Road. We have located another area at Harborton that the Corps has agreed could be filled. I currently am preparing a new permit that will allow you to use a different area of the site to continue to place materials collected from the highway.

If you have any questions, please call me at 226-5611.
Thank you for your cooperation in this matter.

Sincerely,

COLUMBIA-WILLAMETTE DEVELOPMENT COMPANY

Linda M. Bentz
Project Manager

LMB/cz
S026L010

cc: Randy Inloes -- Highway Division
cc: Frank Flynn - Portland District Corps of Engineers
cc: David Larsen - Portland General Electric



US Army Corps
of Engineers
Portland District
Regulatory Functions Branch
P.O. Box 2946
Portland, Oregon 97208

Public Notice of Application for Permit

621341
LAND 15
RECEIVED
Permit
1983
PROPERTY DEPT.
FILE: Harbor

NPPND-RF-1

PUBLIC NOTICE DATE: 11 March 1983

CLOSING DATE: 11 April 1983

REFERENCE NUMBER: 071-OYA-1-004374
(Multnomah Channel - Dredging)

REVISION 1

Interested parties are hereby notified that application has been received for a Department of the Army permit for certain work in waters of the United States, as described below and shown on the attached plan.

APPLICANT: Alexander E. Frederick
Route 5, Box 101
Portland, Oregon 97231
(503) 286-5537

LOCATION: Multnomah Channel, Mile 21.5, Multnomah County, near Portland, Oregon.

WORK: The applicant proposes to conduct maintenance dredging to a maximum depth of -10 feet M.S.L., removing approximately 5,000 cubic yards of bottom sediment over the 5-year life of the permit. The work is to be accomplished by a hydraulic dredge, with the dredged material to be placed above and shoreward of the ordinary high water line, as shown on the attached drawing marked 004374 (Multnomah Channel - Dredging). The dredged material will be placed in a previously used, bermed upland disposal site which is surrounded by wetlands. This is to continue maintenance dredging previously authorized by Department of the Army Permit No. 071-OYA-2-002358.

PURPOSE (Per Applicant): To provide adequate depth in commercial moorage area.

ADDITIONAL INFORMATION: Additional information may be obtained from Alexander E. Frederick, Route 5, Box 101, Portland, Oregon 97231, telephone (503) 286-5537, or Roy Loghry, Permit Coordinator, Portland District, U.S. Army Corps of Engineers, P.O. Box 2946, Portland, Oregon 97208, telephone (503) 221-6995.

AUTHORITY: This permit will be issued or denied under the following authorities:

- (X) Perform work in or affecting navigable waters of the United States -
Section 10, River and Harbor Act 1899 (33 U.S.C. 403).
- () Section 404, Clean Water Act (33 U.S.C. 1344).
- () Transport dredged material for the purpose of dumping it into ocean waters -
Section 103, Marine Protection, Research and Sanctuaries Act of 1972
(33 U.S.C. 1413).

NPD 16C
SEP 81

SPECIAL CONDITIONS: The requested permit, if issued, will be subject in part to the following conditions:

a. Care will be taken to prevent any petroleum products, chemicals, or other deleterious materials from entering the water.

b. Work in the waterway will be done so as to minimize turbidity increases in the water that tend to degrade water quality and damage aquatic life.

c. Land disposal of dredged material will be accomplished behind adequately maintained protective berms, which will prevent the material from returning to the waterway.

d. Backwashing of the hydraulic dredge intake line is to be held to an absolute minimum, and, when backwashing is necessary, the intake will be raised no more than 3 feet above the bed material.

e. Waste water from hydraulic dredging operations shall comply with appropriate water quality standards.

f. The disposal area, method of disposal, or method of dredging will not be changed without prior written approval of the District Engineer.

g. If the permittee, during prosecution of the work authorized herein, encounters a previously unidentified archeological or other cultural resource within the area subject to Department of the Army jurisdiction that might be eligible for listing in the National Register of Historic Places, he shall immediately notify the District Engineer.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until certification, as required under Section 401 of the Clean Water Act (P.L. 95-217), has been received or is waived from the certifying state. Waiver will be deemed to occur if the certifying state fails or refuses to act on the request for certification within 60 days. Attached is the state's notice advertising the request for certification.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

ENDANGERED SPECIES: Preliminarily, the described activity will not affect endangered species, or their critical habitat designated as endangered or threatened, under the Endangered Species Act of 1973 (87 Stat. 844). Formal consultation under Section 7 of the Act is not required for the described activity.

FLOOD PLAIN MANAGEMENT: Evaluation of the described activity will include conformance with appropriate State or local flood plain standards; consideration of alternative sites and methods of accomplishment; and weighing of the positive, concentrated and dispersed, and short- and long-term impacts on the flood plain.

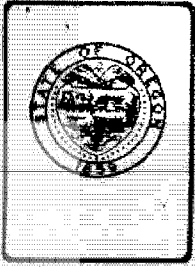
NPPND-RF-1
004374 (Rev. 1)

CULTURAL RESOURCES: The property described is not a registered or eligible property in the latest published version of the National Register of Historic Places.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the described activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the described activity must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the described activity will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people.

ADDITIONAL REQUIREMENTS: State law requires that leases, easements, or permits be obtained for certain works or activity in the described waters. These State requirements must be met, where applicable, and a Department of the Army permit must be obtained before any work within the applicable Statutory Authority, previously indicated, may be accomplished. Other local governmental agencies may also have ordinances or requirements which must be satisfied before the work is accomplished.

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision.




Victor Atiyeh
Governor

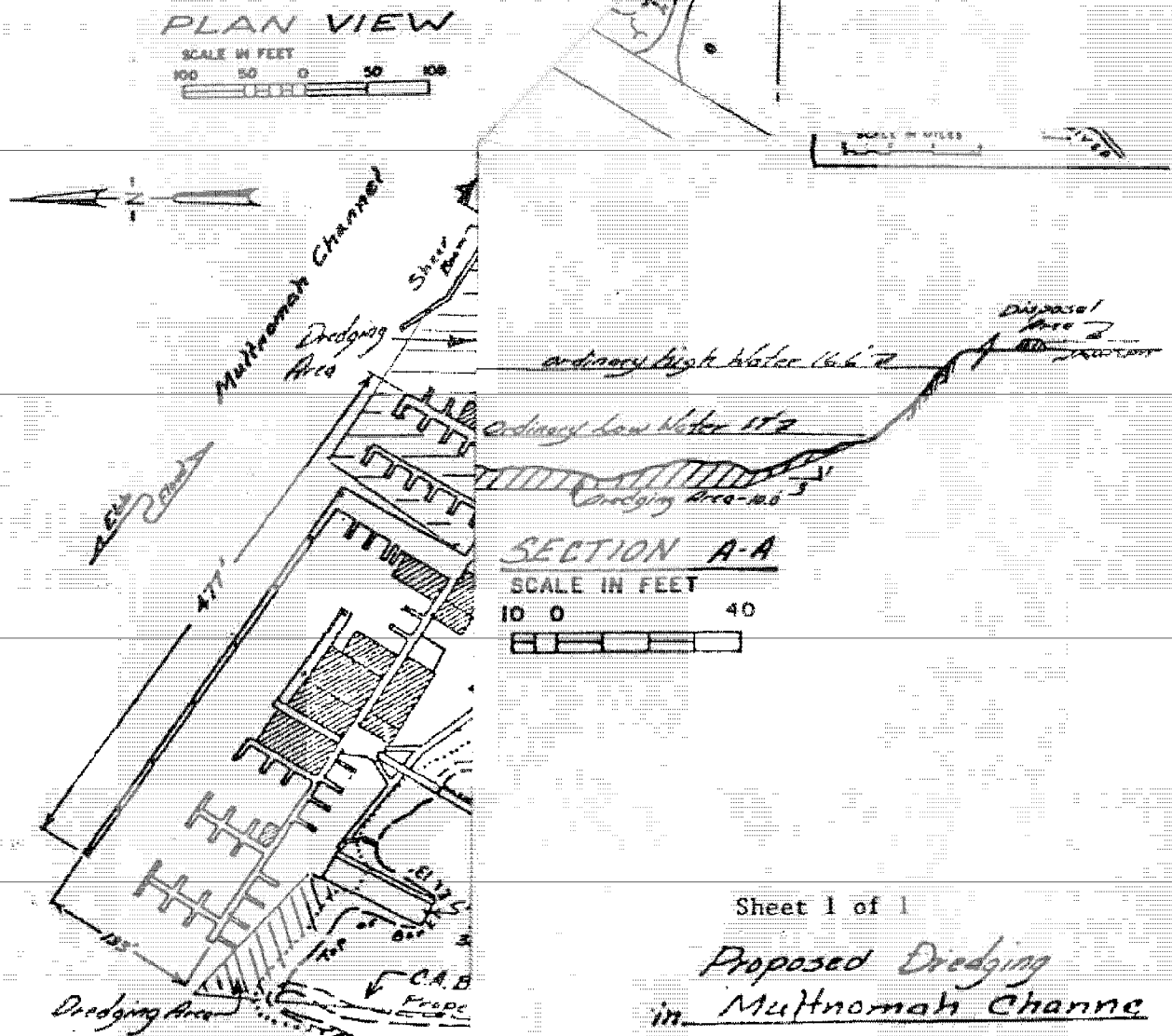
Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229- 5358

PUBLIC NOTICE

The following shall constitute public notice by the State of Oregon that the Department of Environmental Quality, pursuant to the requirements of Section 401 of the Clean Water Act of 1977, PL 95-217 has been requested to certify that there is reasonable assurance that the project described in Corps of Engineers Public Notice No. 071-OYA-1-004374 will not violate applicable water quality standards. Comments regarding possible water quality effects of the proposed project shall be sent within 30 days to the Department of Environmental Quality, P. O. Box 1760, Portland, Oregon 97207.

Note: Elevations refer to mean sea level datum
House boats or boat houses - 



Sheet 1 of 1

Proposed Dredging
in Multnomah Channel
at Mile 21.5
County of Multnomah, State Or.
Application by A.E. Fredrick
Date 18 FEBRUARY 1983



Portland General Electric Company

RECEIVED

JAN 24 1983
PROPERTY DEPT.

FILE: B21-346
LAND 18
PERMIT

January 21, 1983

Mr. M. D. Paine
District Maintenance Supervisor
Oregon State Highway Division
9002 SE McLoughlin Blvd
Portland OR 97222

Dear Mr. Paine:

We have reviewed your proposal to dispose of fill material at our Harborton Substation property; we have no objection to this fill.


Start at the North end of our driveway, at the turnaround, and fill around it (approximately the area I have marked on the attached drawing as No. 1), and as you obtain enough material, continue on Northeasterly out to the river in that area.

If you should have a large amount of material and/or even clean concrete waste or large boulders, we do have a couple of areas where they could be disposed of. However, we would like to direct the placement on an individual basis, so that they would be placed in an area where they would not interfere with future development.

If you need any additional information, call me and I will obtain it for you.

Yours truly,

David N. Larsen
Manager, Property Department

 DNL/RWS/5hh1A20

Enclosures

Hillsboro Landfill, Inc.

3205 SE MINTER BRIDGE ROAD HILLSBORO, OR 97123

PERMIT # 105082OR

Tracking Number 13470

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated _____

EXPIRES: 3/1/10

GENERATOR: PGE - HARBORTON STORAGE YARD

DESCRIPTION: PCS, GRAVEL - MINERAL OIL	TONS: 150
<input type="checkbox"/> SPECIAL WASTE <input checked="" type="checkbox"/> CS <input type="checkbox"/> C&D <input type="checkbox"/> CLEAN-UP	
LOCATION: PORTLAND, OREGON 12500 NW MARINA WAY	COUNTY: Multnomah
CONTACT: BRANDY HORN	PHONE: 503-464-8970 FAX: 503-464-8527

BILLING: Landfill account PORTLAND GENERAL ELECTRIC	PO#: N/A	JOB#: N/A
--	----------	-----------

We accept business checks, cash, VISA / Mastercard or charge (with prior approval)

SPECIAL HANDLING : NONE:	
MK	TyT

APPROVED: 	KRISTIN CASTNER	DATE: 12/01/09 12:34:17 PM
---	-----------------	----------------------------

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

THERE IS A MINIMUM CHARGE OF \$50-\$60 FOR EACH LOAD OF SPECIAL WASTE



WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROHIBITED

Generator's Non-hazardous Waste Profile Sheet



Requested Disposal Facility Hillsboro Landfill

Profile Number 105082OR

☐ Renewal for Profile Number _____

Waste Approval Expiration Date _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: Harborton Storage Yard
2. Site Address: 12500 NW Marina Way
3. City/ZIP: Portland, 97231
4. State: Oregon
5. County: USA
6. Contact Name/Title: Brandy Horn / Environmental Specialist
7. Email Address: brandy.horn@pgn.com
8. Phone: 503-464-8970
9. FAX: 503-464-8527
10. NAICS Code: _____
11. Generator USEPA ID #: _____
12. State ID# (if applicable): _____

B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: Portland General Electric Company
2. Billing Address: 121 SW Salmon Street - 3WTCBR05
3. City, State and ZIP: Portland, Oregon, 97204
4. Contact Name: Brandy Horn
5. Contact Email: brandy.horn@pgn.com
6. Phone: 503-464-8970
7. Transporter Name: Baseline Industrial Construction Inc.
8. Transporter ID # (if appl.): _____
9. Transporter Address: _____
10. City, State and ZIP: _____

C. Waste Stream Information

1. DESCRIPTION

a. Common Waste Name: Non-Hazardous Materials - Soil & Gravel

State Waste Code(s): _____

b. Describe Process Generating Waste or Source of Contamination:

Storage yard cleanup

c. Typical Color(s): brown, grey

d. Strong Odor? ☐ Yes ☒ No Describe: _____

e. Physical State at 70°F: ☒ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____

f. Layers? ☒ Single layer ☐ Multi-layer ☐ NA

g. Water Reactive? ☐ Yes ☒ No If Yes, Describe: _____

h. Free Liquid Range (%): _____ to _____ ☒ NA(solid)

i. pH Range: ☐ ≤2 ☐ 2.1-12.4 ☐ ≥12.5 ☒ NA(solid) ☐ Actual: _____

j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☒ NA(solid) ☐ Actual: _____

k. Flammable Solid: ☐ Yes ☒ No

l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

Constituents (Total Composition Must be > 100%)	Lower Range	Unit of Measure	Upper Range	Unit of Measure
1. <u>Soil</u>	<u>0</u>	<u>%</u>	<u>60</u>	<u>%</u>
2. <u>Gravel</u>	<u>0</u>	<u>%</u>	<u>40</u>	<u>%</u>
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION

a. ☒ One Time Event ☐ Base ☐ Repeat Event

b. Estimated Annual Quantity: 100 ☐ Tons ☒ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____

c. Shipping Frequency: Once Units per ☐ Month ☐ Quarter ☐ Year ☒ One Time ☐ Other

d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☒ No

e. USDOT Shipping Description (if applicable): _____

3. SAFETY REQUIREMENTS (Handling, PPE, etc.): NA



Generator's Non-hazardous Waste Profile Sheet

105082OR

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☒ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☒ No
- ☐ Delisted Hazardous Waste ☐ Excluded Wastes Under 40 CFR 261.4
- ☐ Treated Hazardous Waste Debris ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☒ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☒ No
- a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
- b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☒ No
- a. If yes, is disposal regulated under TSCA? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☒ No
7. Does the waste contain asbestos? ☐ Yes ☒ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☒ No
- If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

- Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
- Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
- Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
- Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
- Check all that apply:
 - ☒ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested:
Test America / Sample 1-S1 & 2-S3 / PCB & TPH-DX # Pages: 9
 - ☐ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested).
Attachment #: _____
 - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical).
Indicate the number of attached pages: _____
 - ☒ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
 - ☒ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: _____ Title: Environmental Specialist

Company Name: Portland General Electric Company Name (Print): Brandy Horn

Date: December 1, 2009

FOR WM USE ONLY

Management Method: ☐ Landfill ☐ Bioremediation Approval Decision: ☐ Approved ☐ Not Approved

☐ Non-hazardous solidification ☐ Other: _____ Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval: _____

☐ Shall not contain free liquid

☐ Shipment must be scheduled into disposal facility

☐ Approval Number must accompany each shipment

☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ Date: _____

State Authorization (if Required): _____ Date: _____